

MSR
Community Technologies Group
Overview

August 16, 2002

Community Technologies Group

**Study, map, and measure
social cyberspaces**

-

Explore emergence of "collective computing"

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**Create novel and useful interfaces to social
cyberspaces**

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Support Microsoft Community initiative

Community Technologies Group

- **Marc Smith**, *Research Sociologist*
- **Duncan Davenport**, *PM, Tech Lead*
- **Paul Johns**, *SQL Lead*
- **Matt Kearns**, *SQL Dev*
- **Dany Rouhana**, *Web Dev Lead*
- **Bas Hugenholtz**, *Web Dev*
- **Fernanda Viegas**, *Intern 2002*
- **Lik Mui**, *Intern 2002*

Product Group Relationships

- **CDDG**
 - Microsoft.com Community Platform Team
- **Office (11)**
 - AWS (Assisted Web Support) Office Community
- **PSS**
 - Community Support Team
- **Developer Support**
 - Platform SDK
- **Intranet Portal Strategy – Internal Community**
 - MSTE, HR, Library, ITG, eKM

MSR Community Research: User Tasks

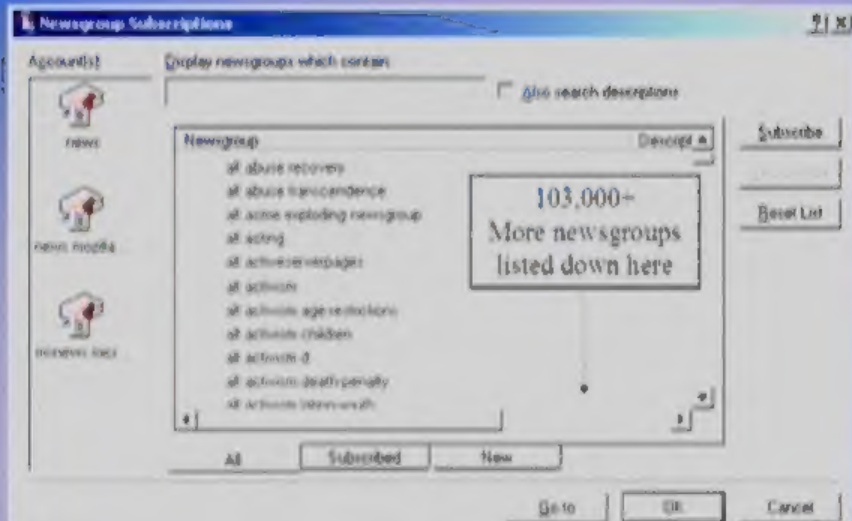
- **Discovery:**
Which community to access?
- **Navigation/Selection:**
What content to make use of?
- **Evaluation:**
What is the value of selected content?
- **Motivation:**
Why should I contribute (more|better|faster)?
- **Content Creation:**
How can I build up useful artifacts from conversations?

Community Research Road Map

- **Data Mining Social Cyberspaces:**
Produce and refine community data processes by Q3
- **Social Accounting Metrics**
Develop measures and methods Microsoft communities
- **Interfaces and Visualizations**
Try maps, thread tree visualizations, piano rolls, network visualizations
- **Server development**
Create prototype integrated community server
- **Field studies**
Deploy and evaluate use by a Microsoft Beta community

Existing interfaces to persistent conversations are limited

Most interfaces provide little or no indication of group size, activity, interconnection, growth, topic...



Existing conversational interfaces lack social data

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Common interfaces to messages and threads organize content only by

Important social dimensions of these interactions are missing in these interfaces, for example:

Community Opportunities

"Helping our customers help our customers."

- **For Microsoft, community can help us**
 - Diffuse the product support burden
 - Listen more effectively to customer feedback
 - Build customer loyalty
 - Cultivate 3rd party champions who speak more authentically than we can ourselves
- **For our customers**
 - They want to do all of this too for their own customers!

Community Challenges

For Managers:

Platform

Tools (message boards, profiles, indexes) are crude and lack integration.

Assessment

It is difficult to know much about the size, activity, usefulness and general health of a community.

Who are the valuable people?

What topics are "hot"?

In what I am doing here, cracked?

Incentive

How to encourage better contributions?

For Participants:

Discoverability

Most people can't find communities, community tools are separate from applications.

Selection

How to choose among hundreds of thousands of messages?

Evaluation

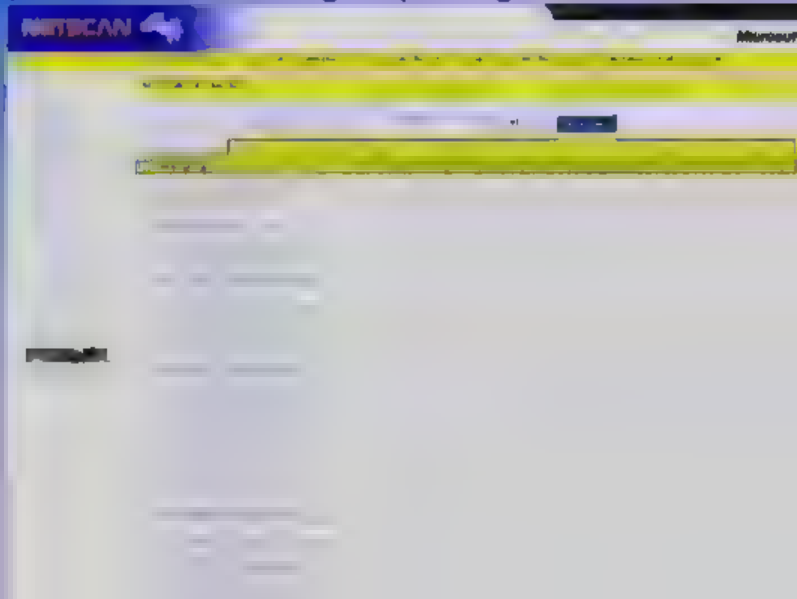
How to determine the quality of responses?

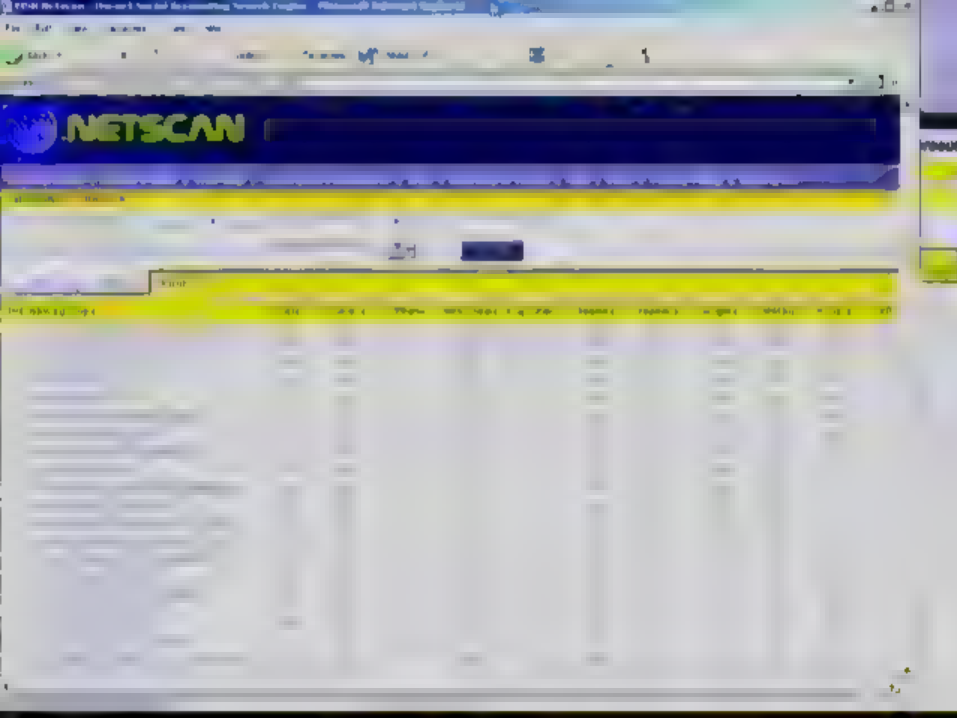
Motivation

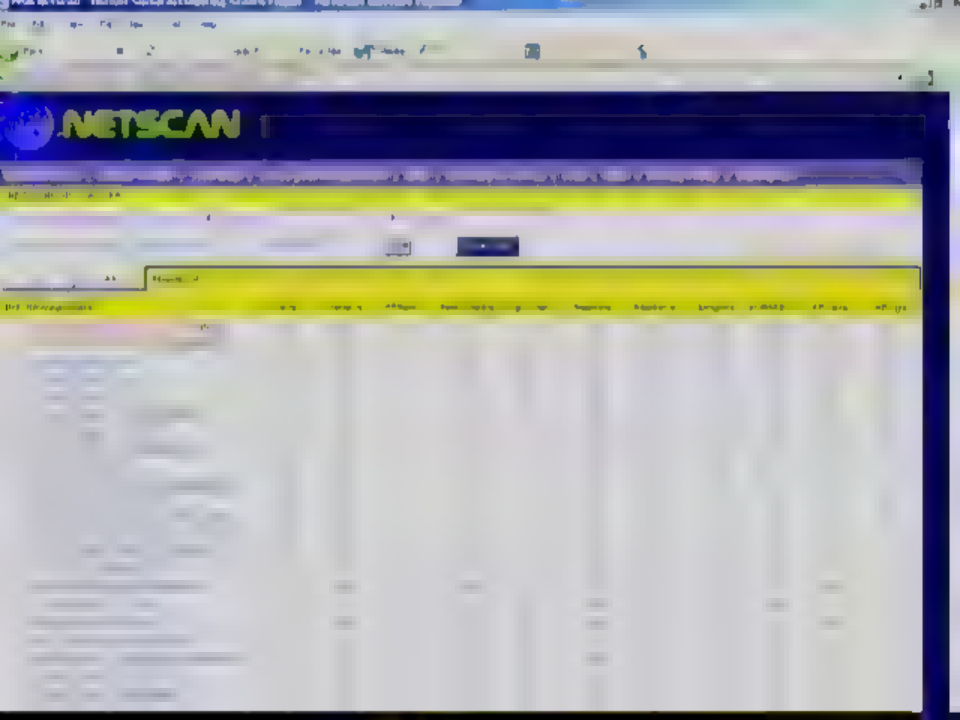
Why should I contribute more, better, faster here?

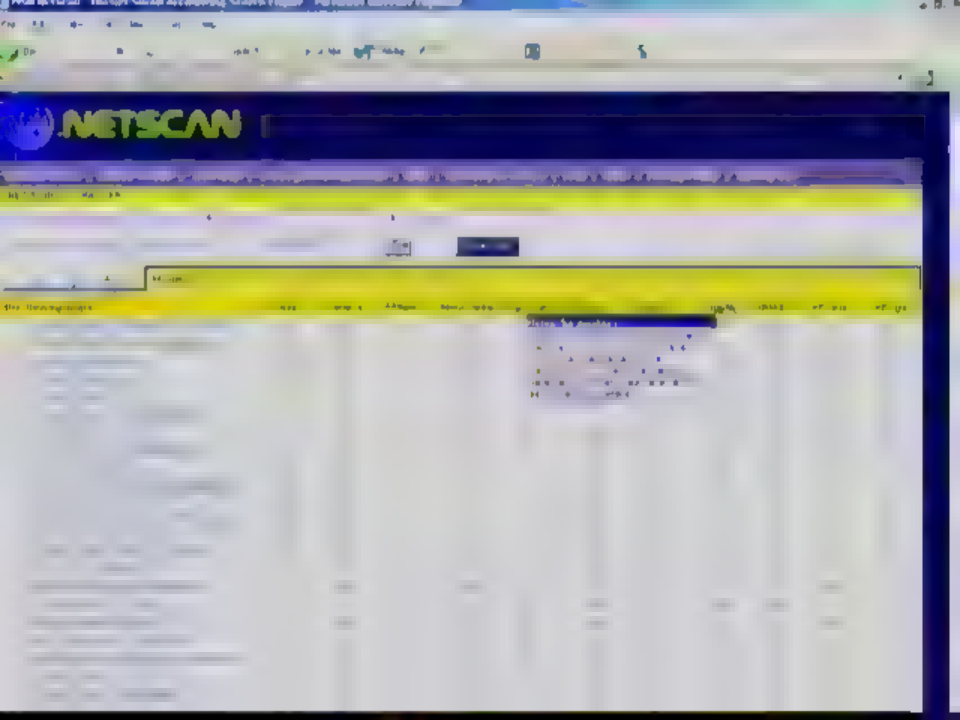
MSR Netscan

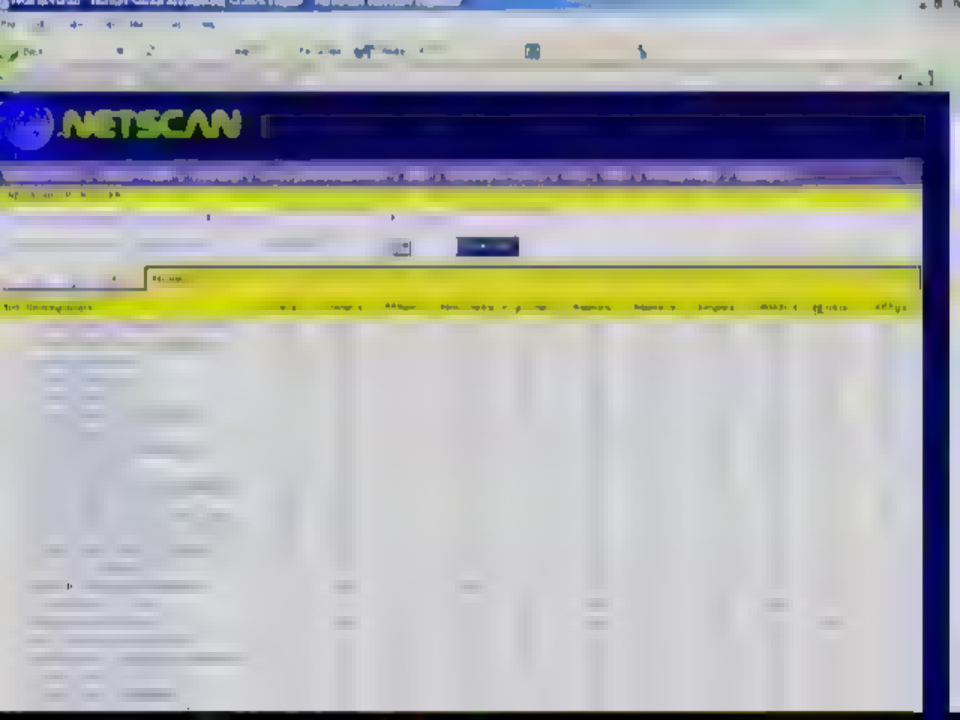
Newsgroup Social Accounting Reporting Service

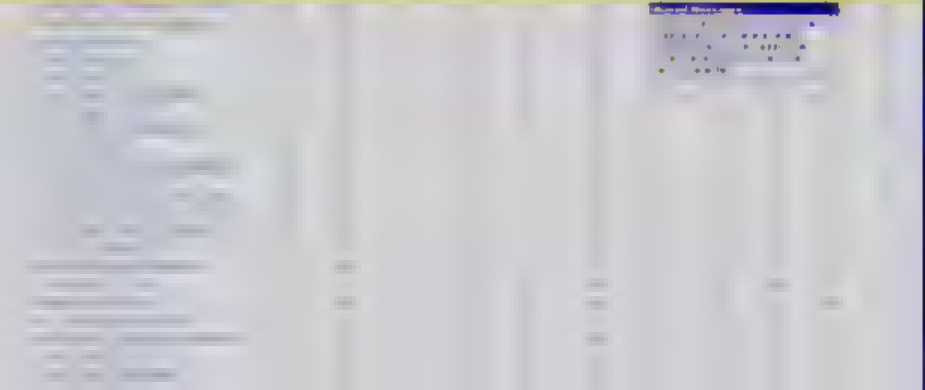
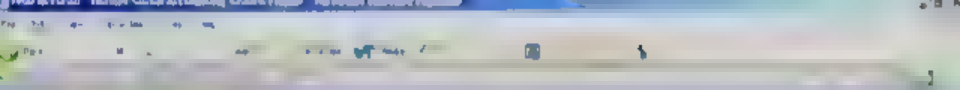


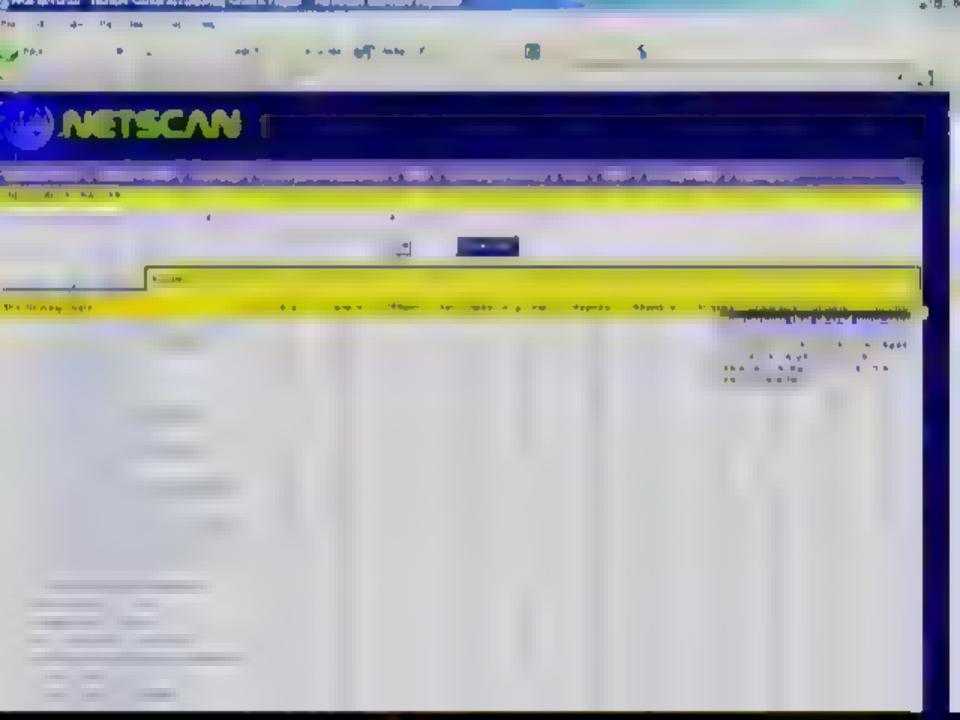


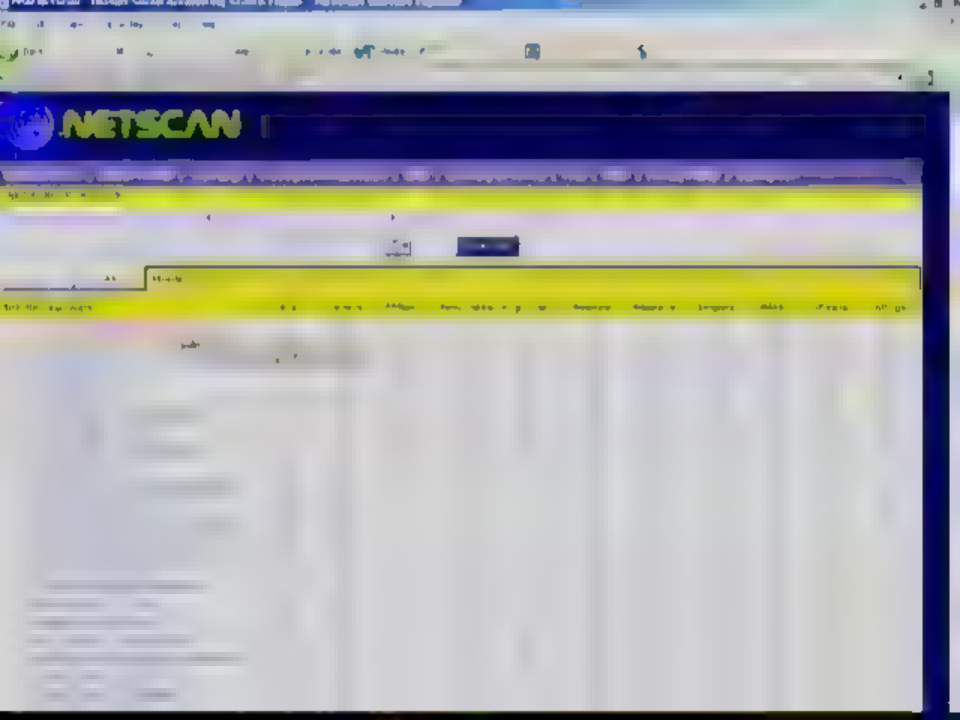


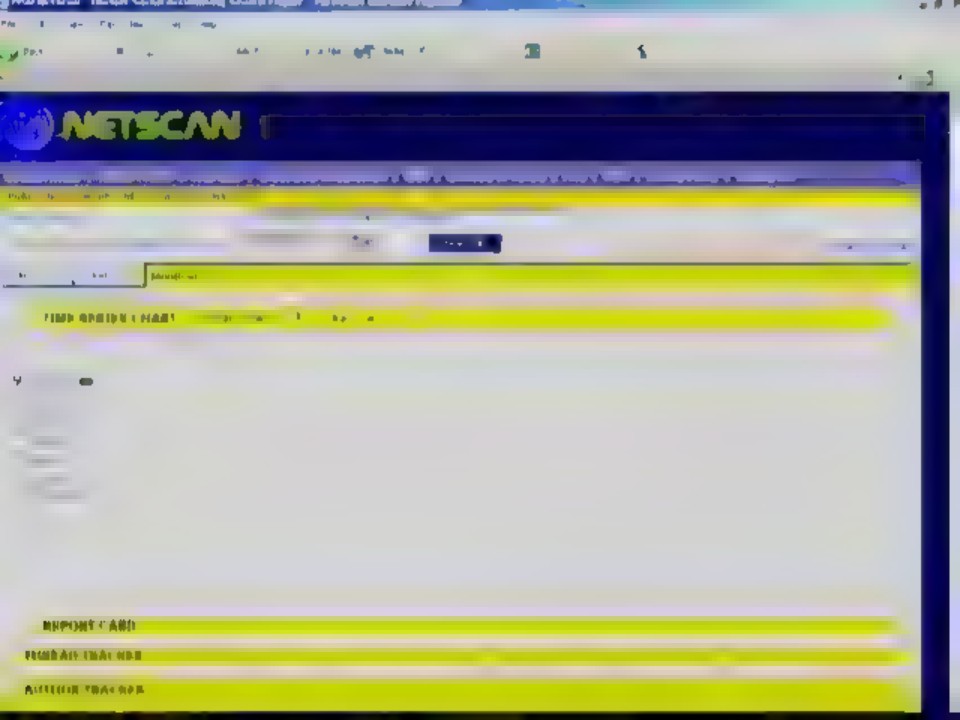










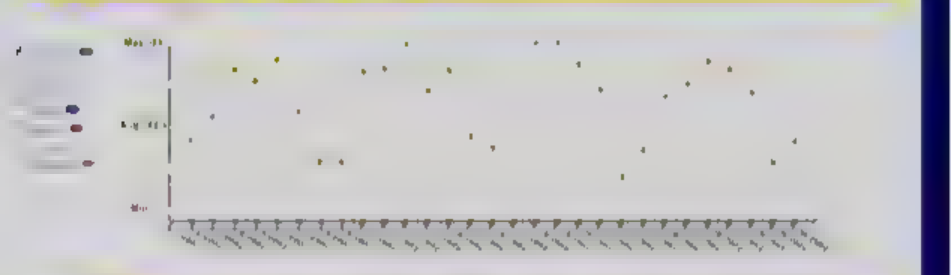


NETSCAN



Summary

TIME CHARTS / HOST



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Report Card

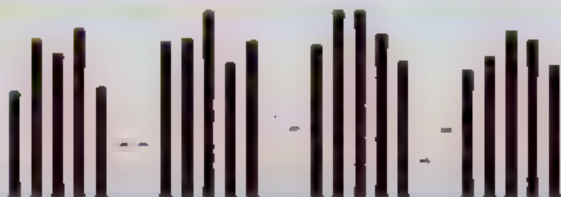


TIME CHART

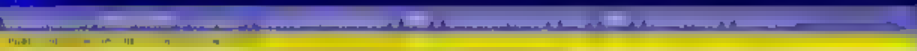
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REPORT CARD

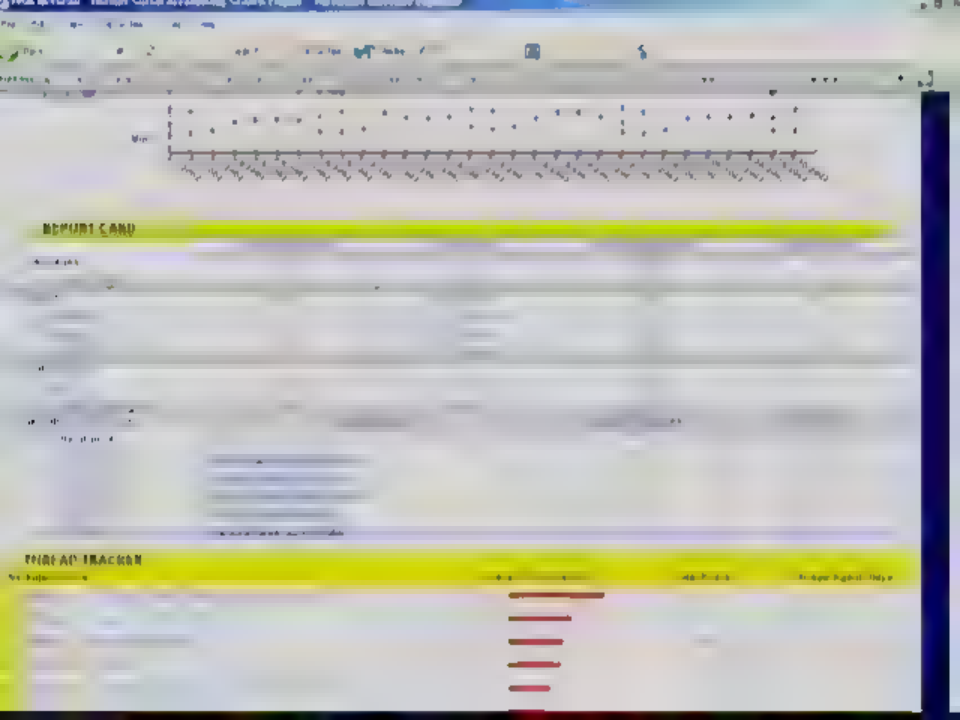


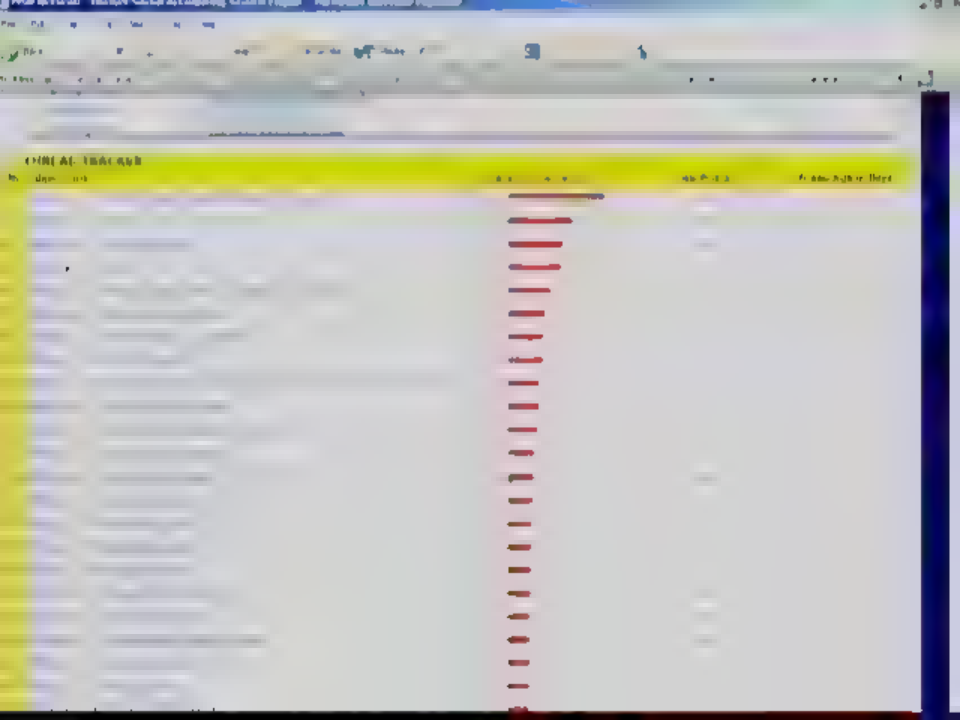
7154 904125 : HART

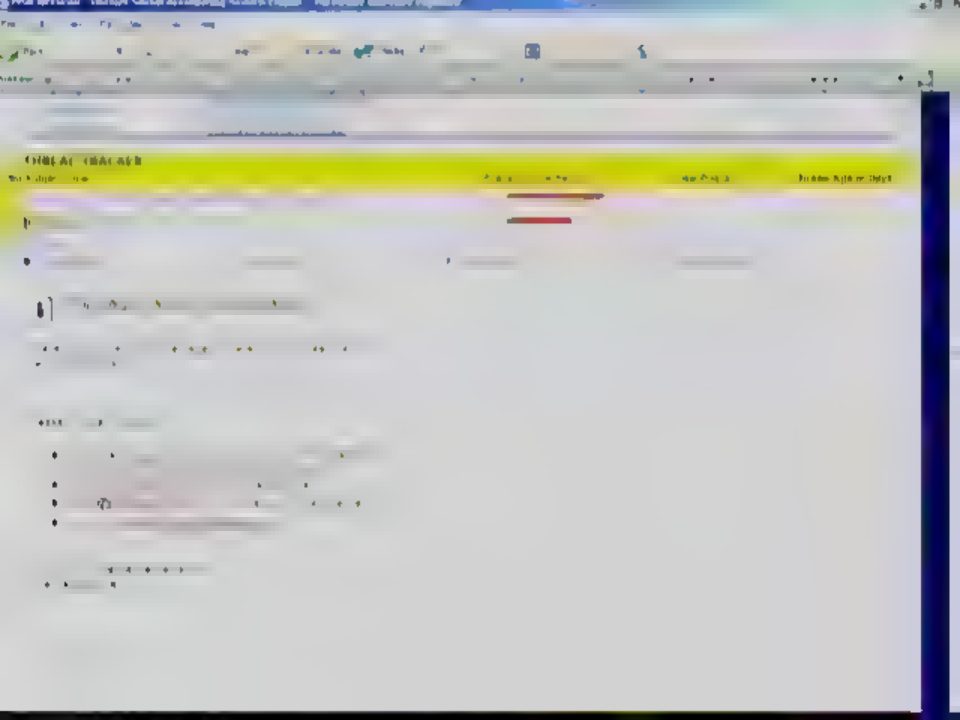


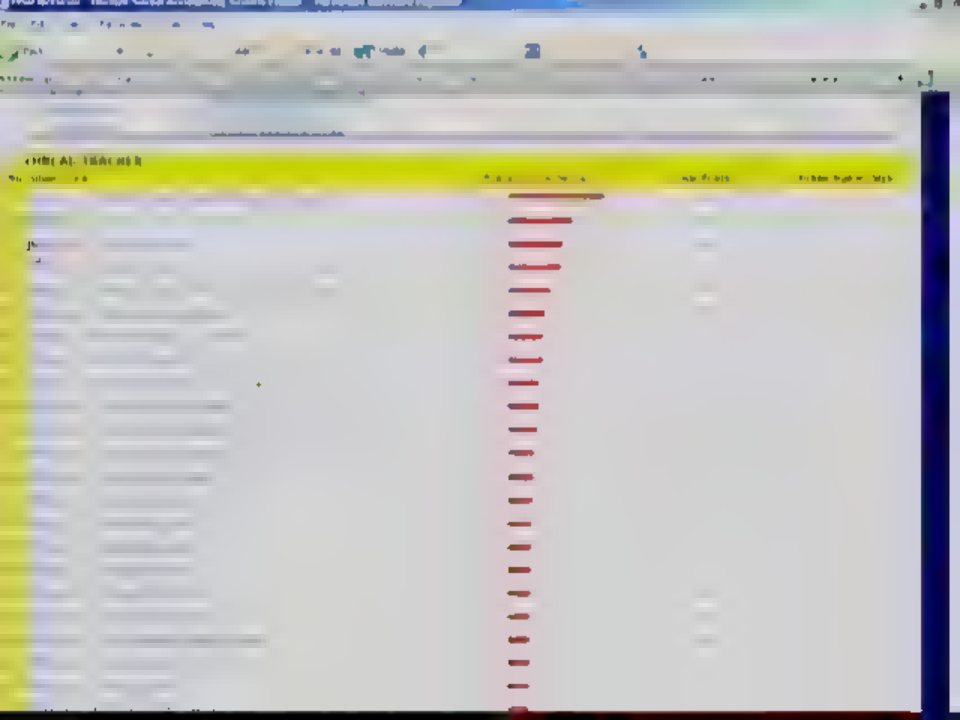
IMPORT CARD

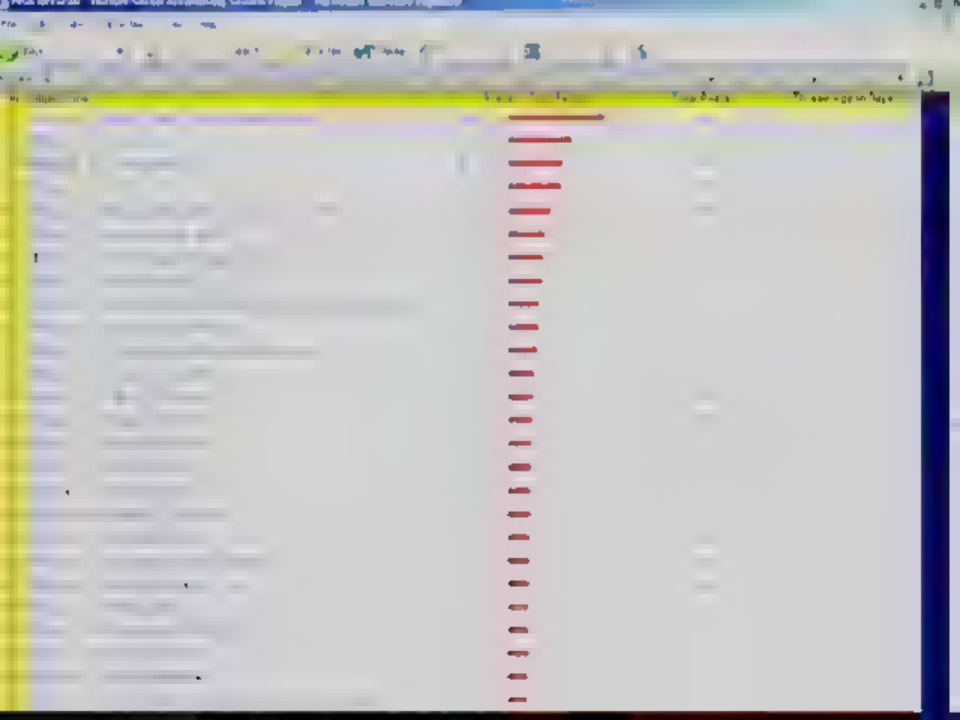


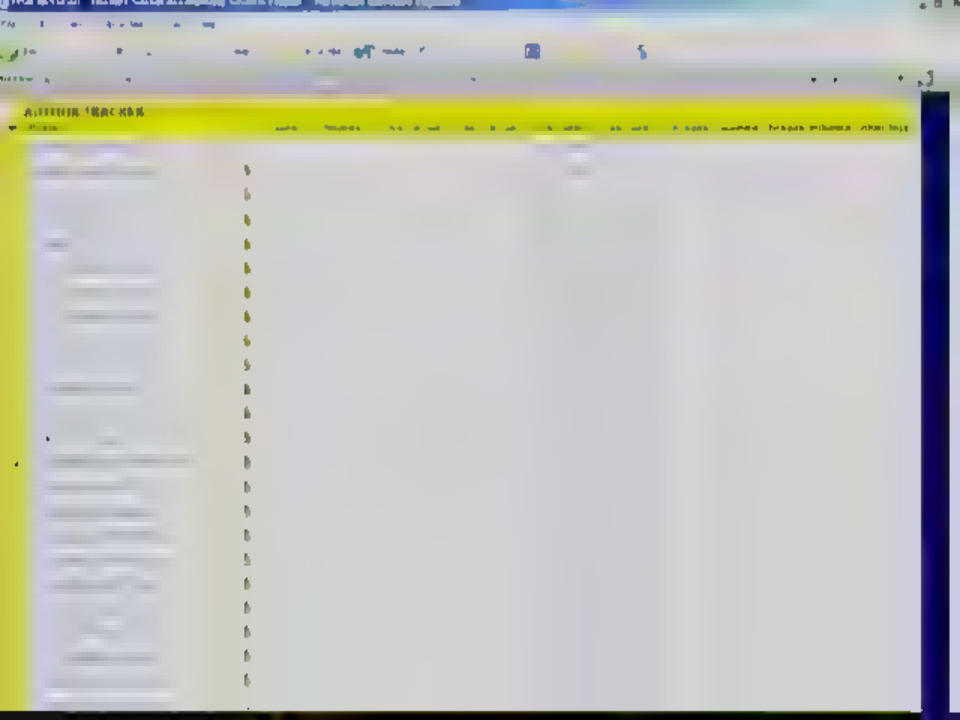


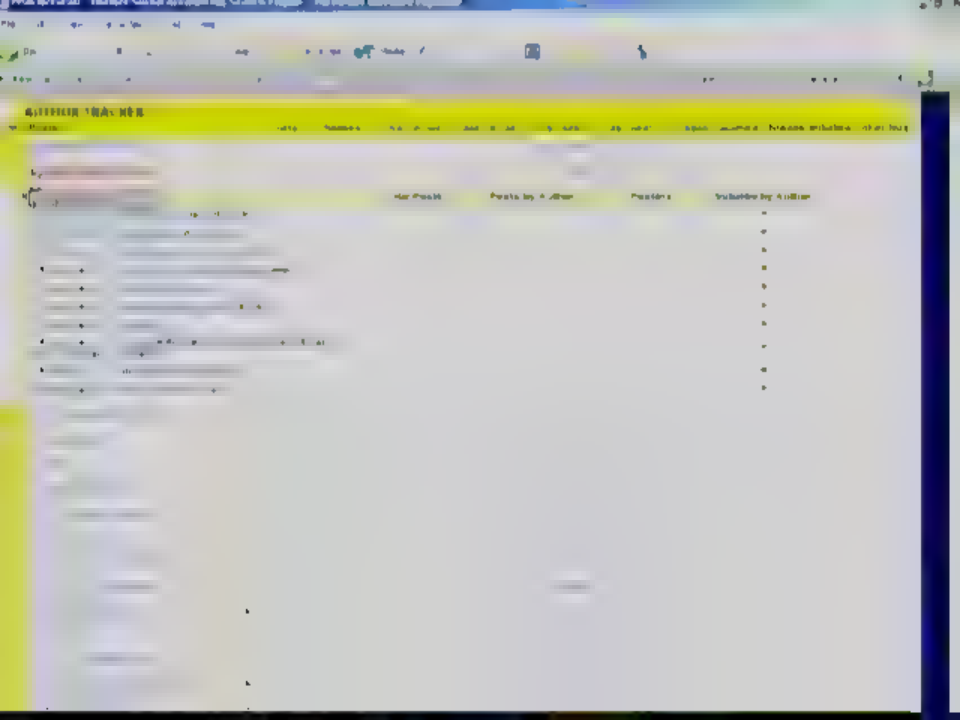




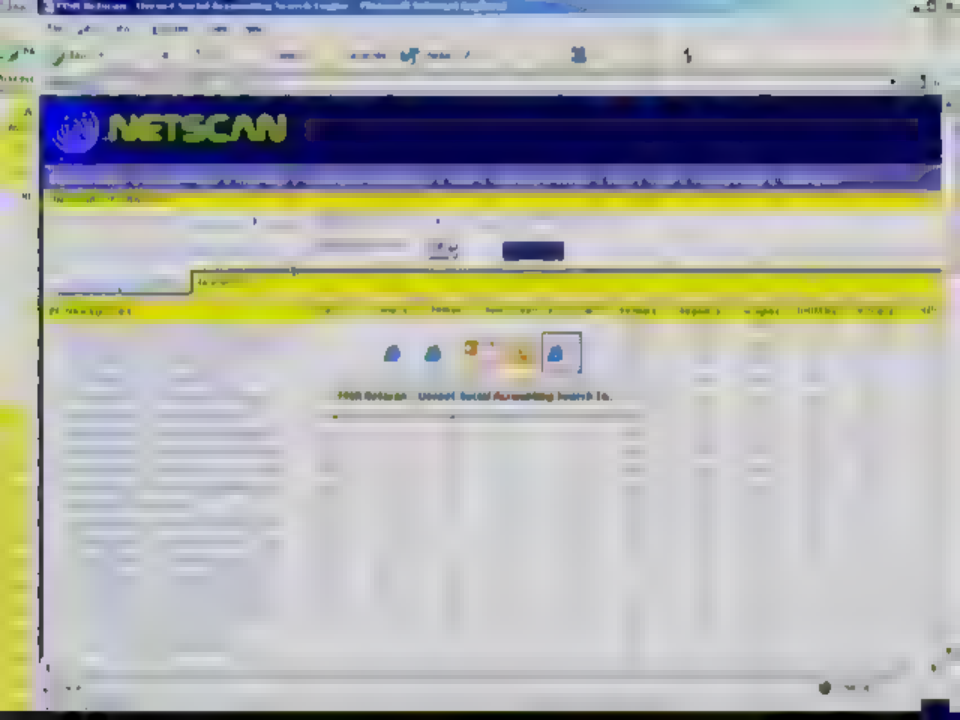


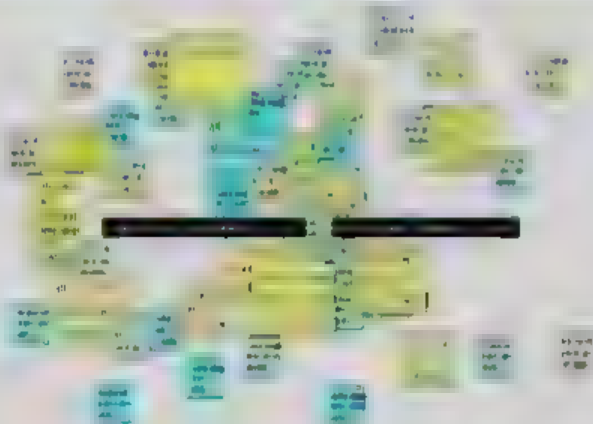


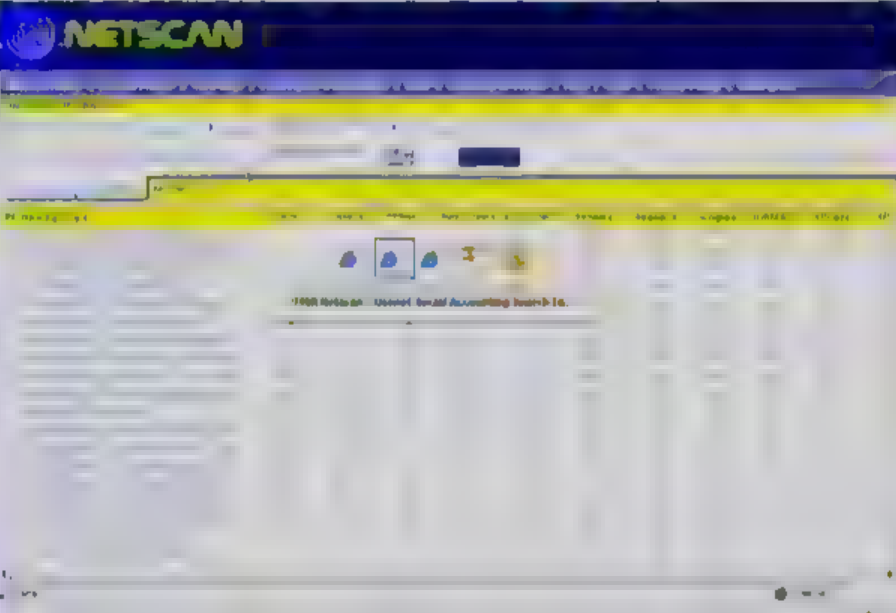


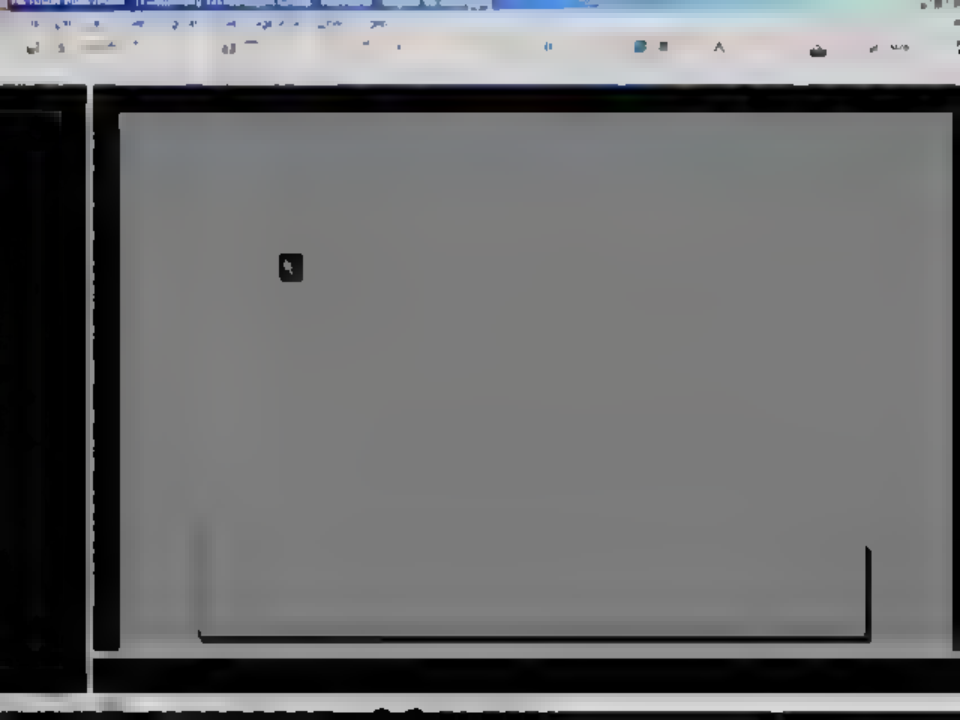


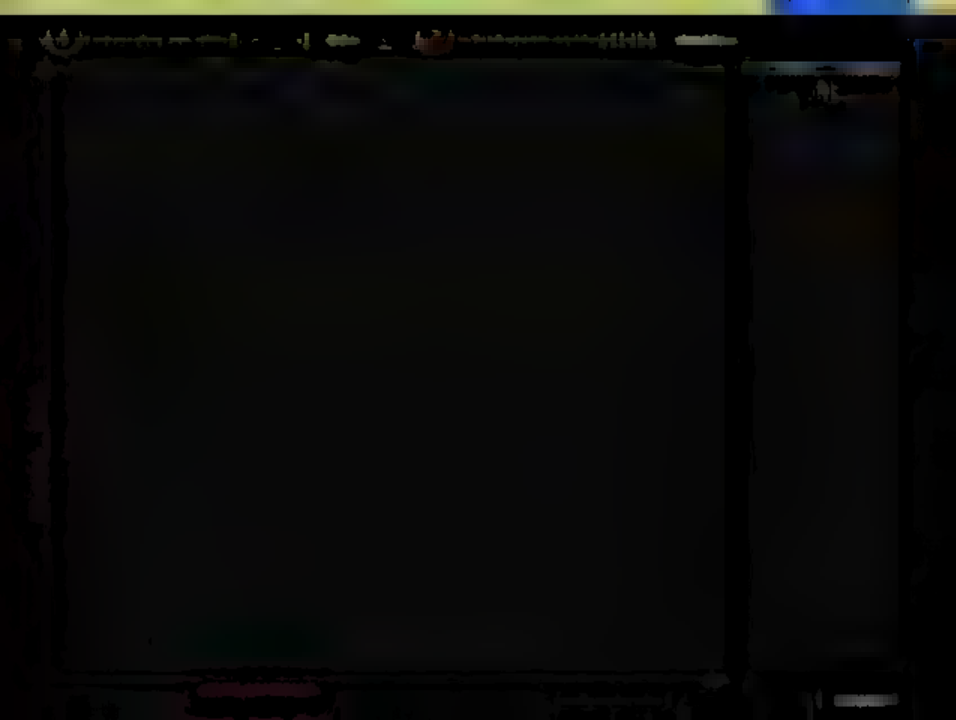
2023年10月10日 星期四 10:10:10				
日期	姓名	性别	年龄	职业
2023-10-10	张三	男	25	程序员
2023-10-10	李四	女	30	设计师
2023-10-10	王五	男	35	产品经理
2023-10-10	赵六	女	40	市场经理
2023-10-10	孙七	男	45	销售经理
2023-10-10	周八	女	50	财务总监
2023-10-10	吴九	男	55	人力资源
2023-10-10	郑十	女	60	行政助理
2023-10-10	冯十一	男	65	保安
2023-10-10	陈十二	女	70	保洁
2023-10-10	林十三	男	75	司机
2023-10-10	黄十四	女	80	厨师
2023-10-10	周十五	男	85	门卫
2023-10-10	吴十六	女	90	保洁
2023-10-10	郑十七	男	95	保安
2023-10-10	冯十八	女	100	保洁
2023-10-10	陈十九	男	105	保安
2023-10-10	林二十	女	110	保洁
2023-10-10	黄二十一	男	115	保安
2023-10-10	周二十二	女	120	保洁
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2023-10-10	郑二十四	女	130	保洁
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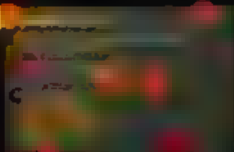






May 1995

18. *Epithymum*
May 1900



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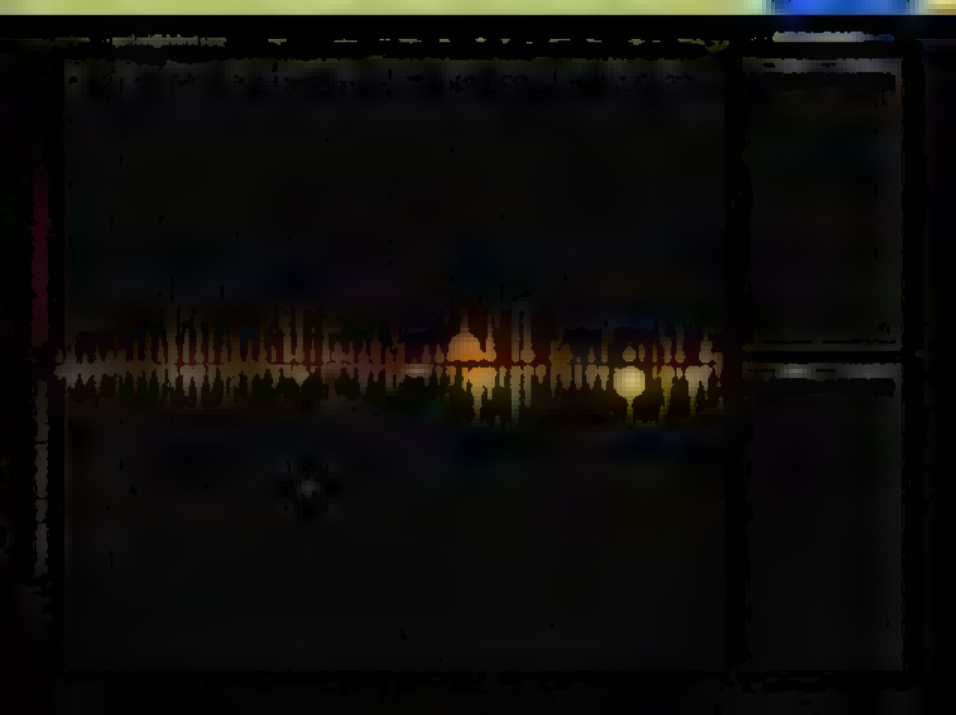


18. *Polypodium*
May 1901

18. *Polypodium*
May 1901
The specimen is a small, dark, rounded object, possibly a seed or a young plant, with a smooth, slightly glossy surface. It is mounted on a small, rectangular piece of paper, which is placed on a larger, dark, textured surface. The background is dark and mottled, suggesting a leather or heavy paper texture. The overall image is somewhat blurry and has a vintage feel.

18. *Chrysomelidae*
May 1944

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7th Dec 1904

8th Dec 1904

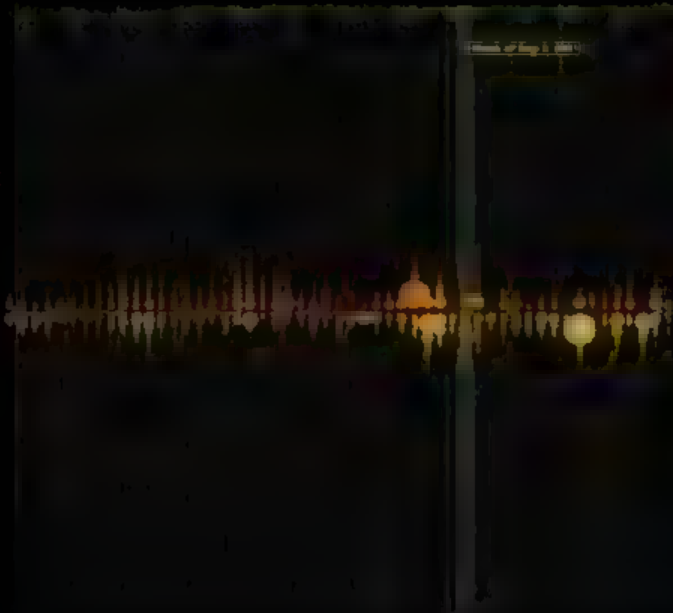
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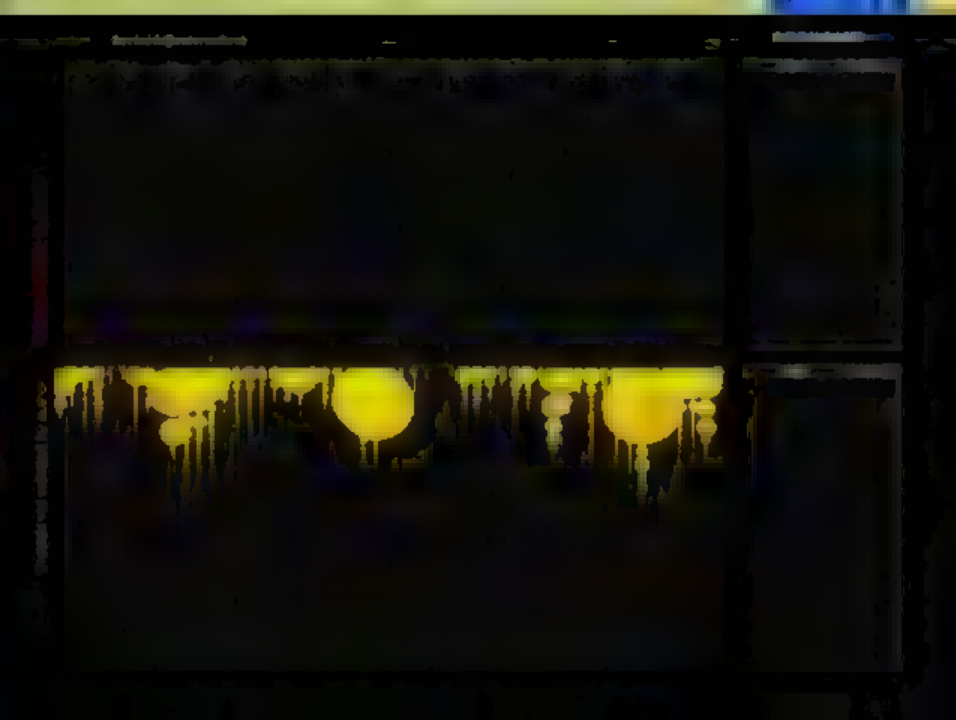
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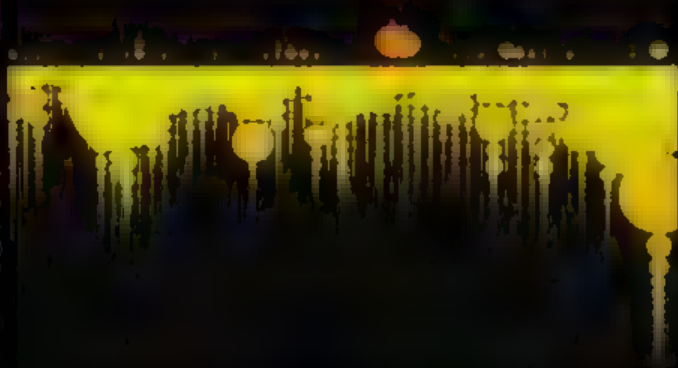
The city of London is a great place to visit. It has a long history and many interesting sights. The Tower of London is one of the most famous landmarks. It was built by the Normans and has been a prison for many famous people. The London Underground is also a very interesting sight. It is the oldest and largest underground railway system in the world.

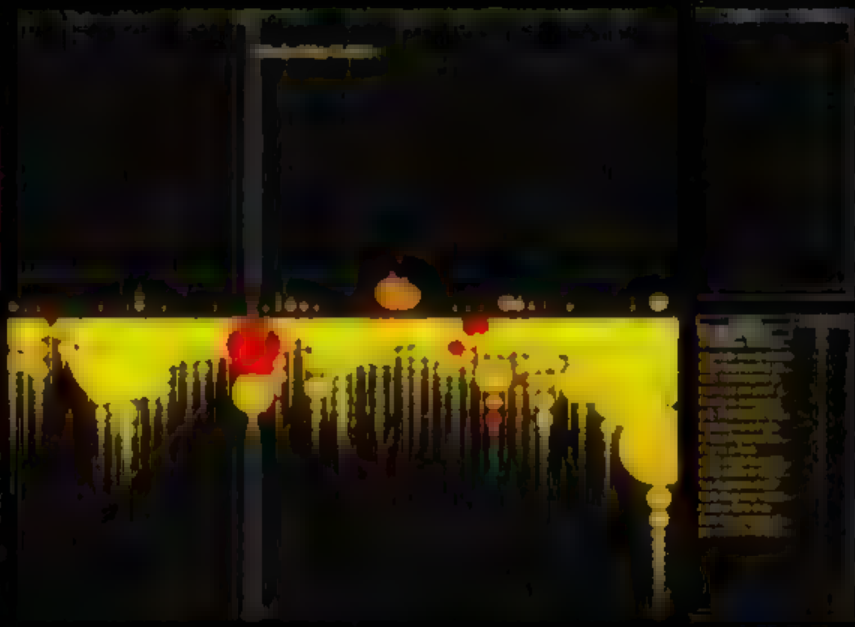
The city of London is a great place to visit. It has a long history and many interesting sights. The Tower of London is one of the most famous landmarks. It was built by the Normans and has been a prison for many famous people. The London Underground is also a very interesting sight. It is the oldest and largest underground railway system in the world.





May 2002





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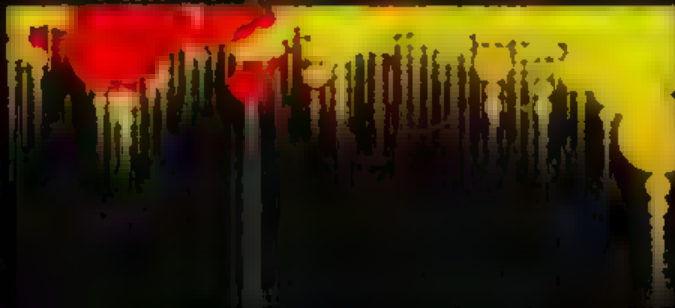
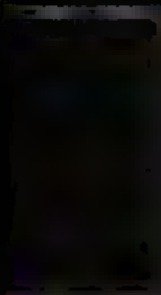
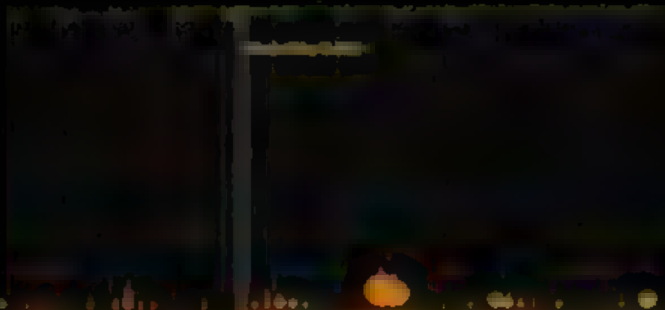
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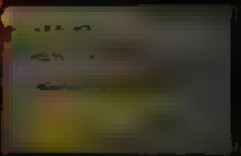


Microsoft Public Via General Internet
May 19 2000



Microsoft Public Via General Internet
May 19 2000

Microsoft Word - [document name]
Page 1 of 1



Microsoft Word - [document name]
Page 1 of 1

[The following text is extremely blurry and illegible, appearing as a series of horizontal lines.]

Microsoft Word - [document name]
Page 1 of 1



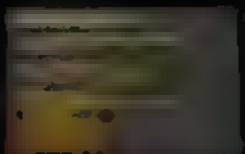
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Microsoft Word - [document name]
Page 1 of 1

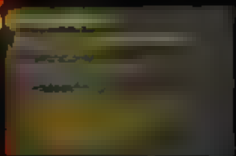


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Microsoft Word 2003 Document
May 19, 2003



Microsoft Word - [document name]
Page 1 of 1



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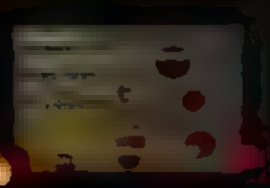
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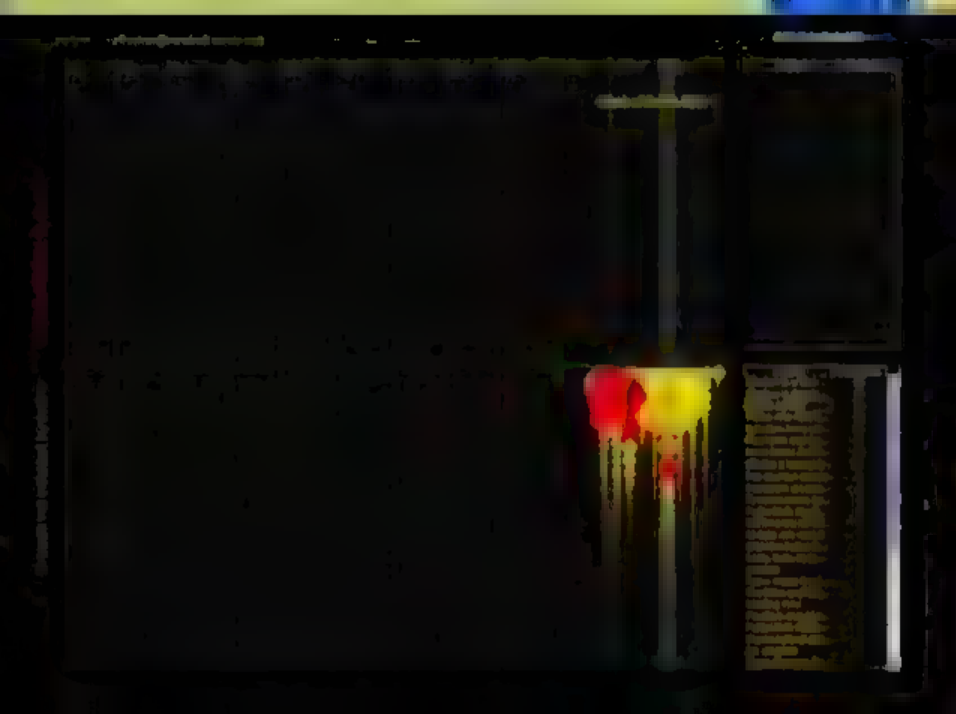
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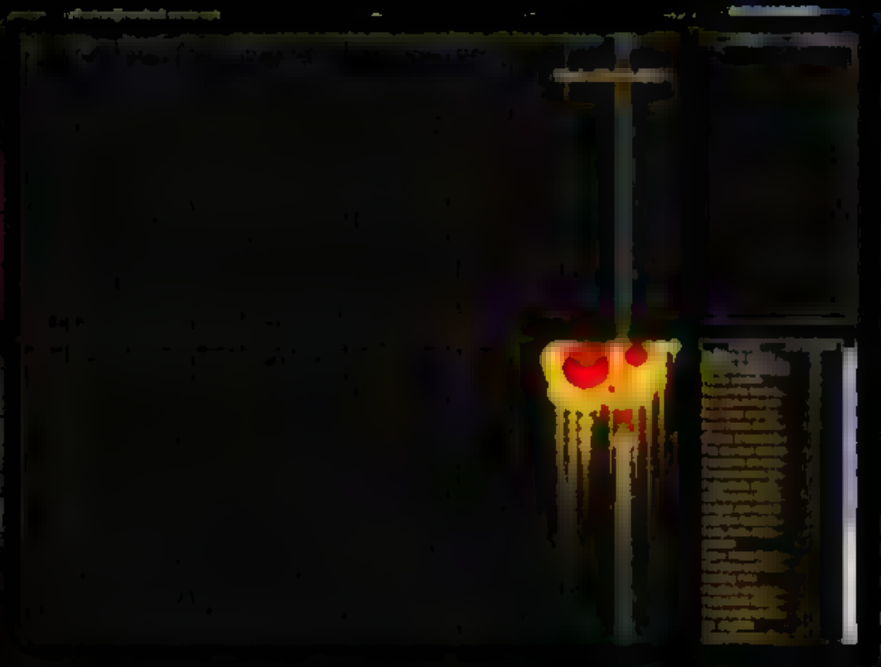
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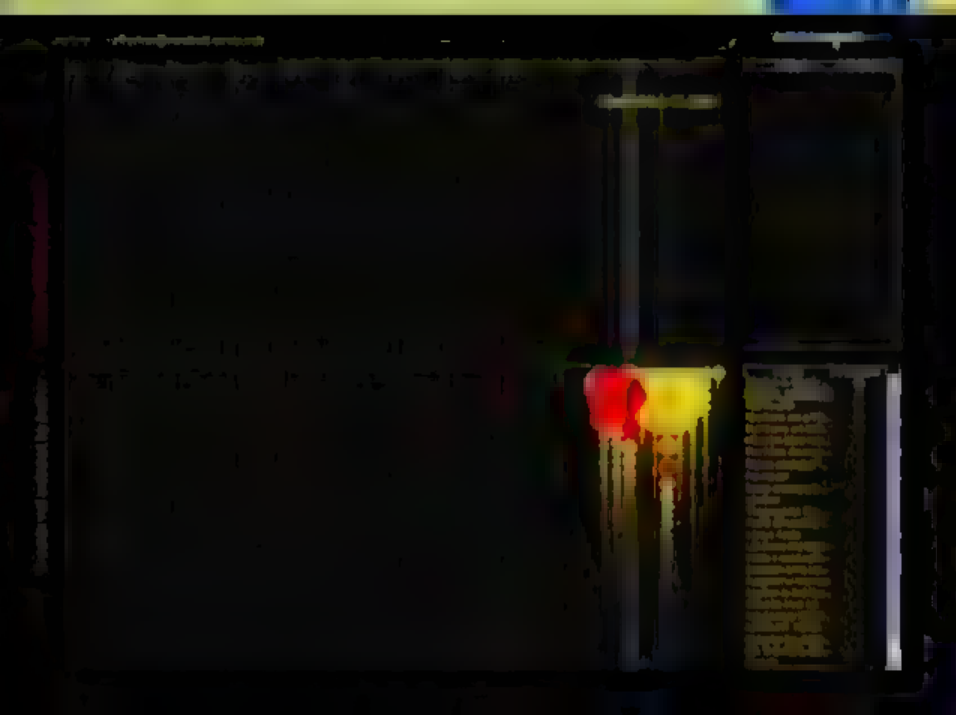


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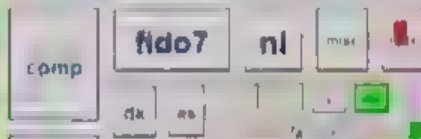
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All of Usenet from the
November 1991



All of Usenet Time News
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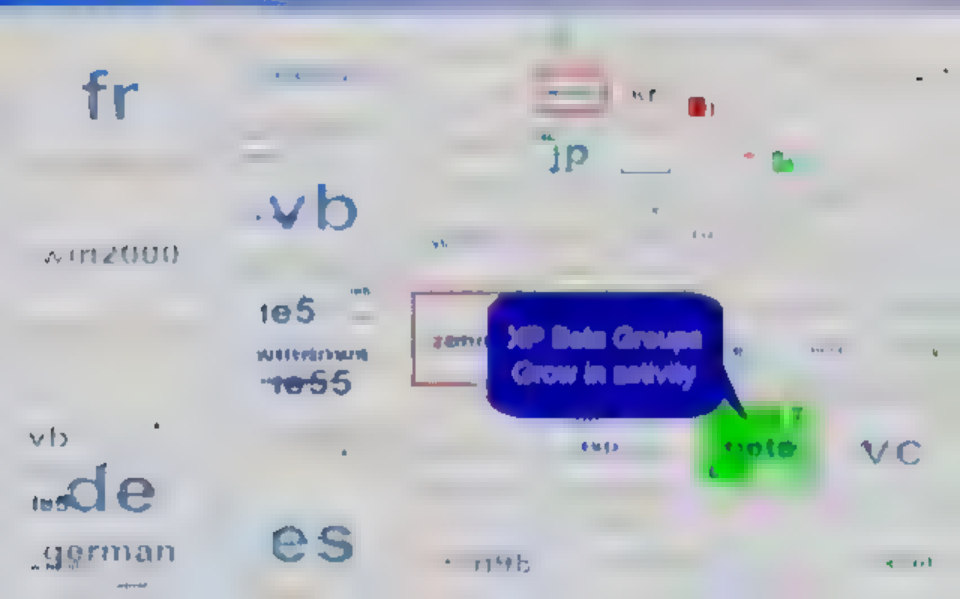
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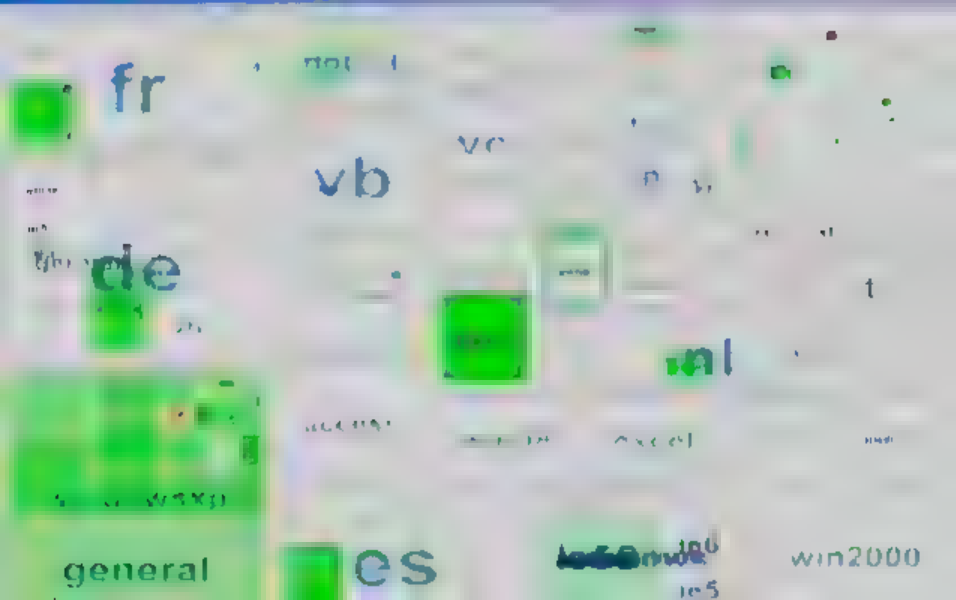
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#1 Newsgroup
WinXP.general
87,783 Posts
8,681 Posters

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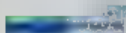
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8,681 Posters

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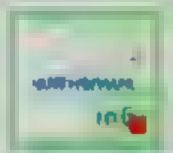
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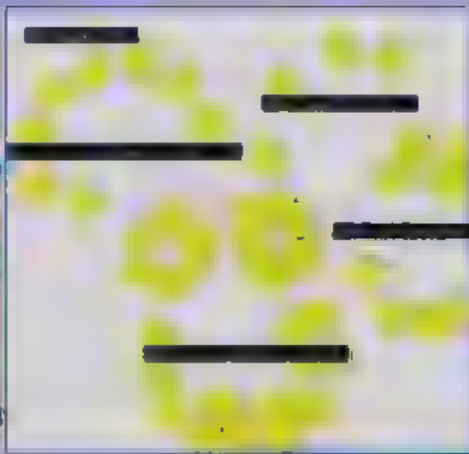
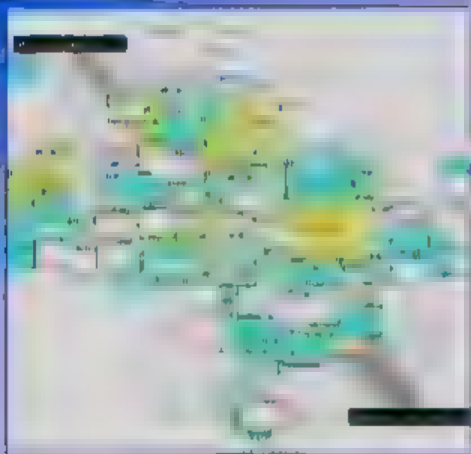
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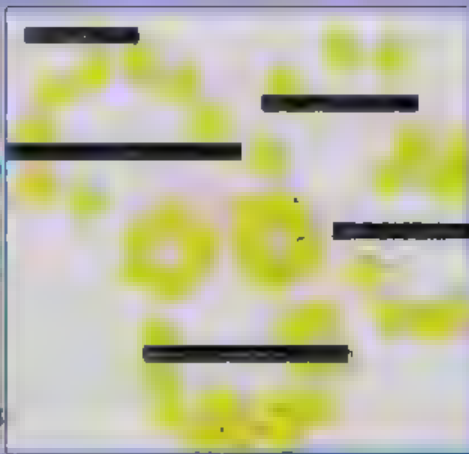
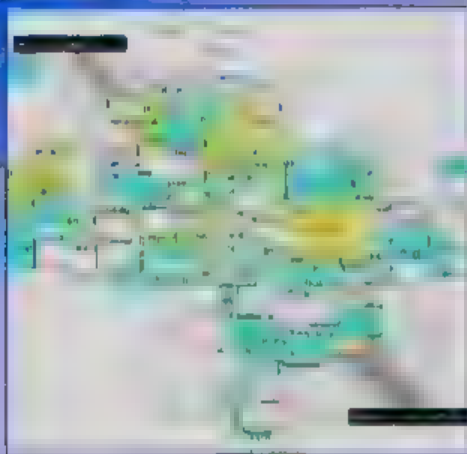
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What is a healthy community?

Flexibility

(of leaders)

Average # of Days
Top 40 Authors are
active

More is good. some people are present in the
newsgroups (even weekends),

Interaction

% Reply
% Unreplied to

More is good
Less is usually better

Size and Growth

People
% Change

More is good up to a point. how big does this
place need to get to be valuable anyway?

Topical Focus

% Crossposted

Some is good but more than 15% suggests a
lack of focus

Speed

Time to reply

Faster is better

Microsoft

Participation

% MS Email
Responses

Careful! Don't stomp the locals. remember we
don't own this place. and the goal should be to
catalyze the community not BE the community

What is a healthy community?

Retention (of leaders)

Average # of Days
Top 40 Authors are
active

More is good some people are present in the
newsgroups (even weekends),
that's dedication!

Interaction

% Reply
% Unreplied to

More is good
Less is usually better

Size and Growth

Posts
% Change

Later we can add #
Questions Closed
and Average Time to
Closure

to a point how big does this
to be valuable anyway?

Topical Focus

% Crosspost

more than 15% suggests a
lack of focus

more than 15% suggests a

Speed

Time to reply

Faster! Faster! Faster!

Microsoft Participation

% MS Posts
Replies

Careful! Don't stomp the locals remember we
don't own this place and the goal should be to
catalyze the community not BE the community

What's next?

- Web service interfaces to Netscan/HALO
- "Delta-ed" community metrics production
- Rich message store and index
- Interface design work
- "Listscan"

Listscan/DL

- Application of Netscan technology to internal Distribution
 - Provide Report Cards for DL Activity
 - Highlight top Participants in DL
 - Provide access to DL Conversations (threads)
 - Centralized DL Access through Web Site
 - Long-term preservation of DL Content
 - New Collector Model : quick turnover and aggregation
 - New Database structures and deployment
 - New Web interface derived from Netscan/MSR-Halo
- Prototype in October, Beta in Dec/Jan, live by end of FY03

Community.NET

Product Overview

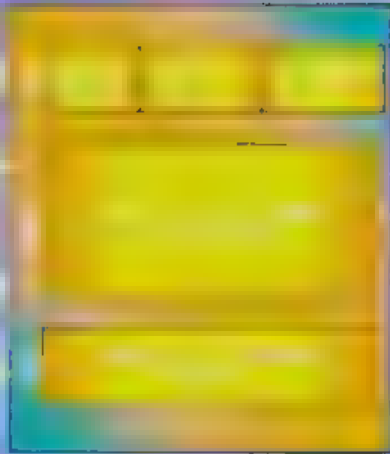
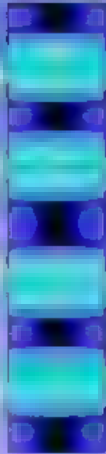


NNTP
Cloud

List
Servers

Web
Boards

??



Community.NET Web Services



My Microsoft



My Microsoft
10 1

My Microsoft

My Microsoft

My Microsoft

My Microsoft

My Microsoft

Summarize each user's history: "What we tell other people about you."

Encourage people to help each other in real-time.

"My Questions"
List answers to questions you asked and summarizes the Answer-person's history

"My Watched People"
List where and what my favorite people posted recently

"My Communities"
Summarize each community's recent content.

"Reputation metrics"
How many questions has this person closed already? How often do they return to this group? How many other people endorse them?

"My Answers"
Track my performance as an answer person.

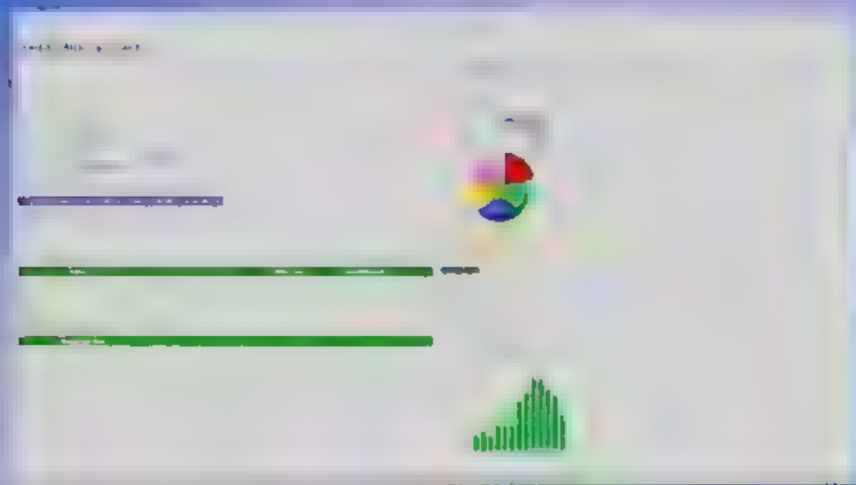
Project Details: Web Interfaces

- **Web Services**

- Flexible, programmatic access to underlying data, Platform Independent.
- Phase I: Author and Newsgroup Data
- Phase II: Thread level data
- Target Customers: Microsoft!
- Existing Customers: PSS, CDDG, and many internal developers. (number of hits = 7800)

First Web Service Applications

- PSS (Product Group EOM Report)



Newsgroup Crowds and AuthorLines

- **Goals:**
 - Visualize patterns of group and individual author behavior in conversational social cyberspaces
 - Provide an interactive, visual interface to Netscan data
 - Study user's ability to make "at a glance" inferences from visualization

Project AURA

<http://aura.research.microsoft.com/>

What is AURA?

Advanced User Resource Annotation

"AURA is a wireless system to enable physical object annotations and to foster communities around these annotations."

So, what is AURA really?

So, what is AURA really?

PDA +

So, what is AURA really?

PDA +

802.11 (Bluetooth/CDPD/3G) +

So, what is AURA really?

PDA +

802.11 (Bluetooth/CDPD/3G) +

Bar Code (RFID) Reader/Camera

So, what is AURA really?

PDA +

802.11 (Bluetooth/CDPD/3G) +

Bar Code (RFID) Reader/Camera

=

So, what is AURA really?

PDA +

802.11 (Bluetooth/CDPD/3G) +

Bar Code (RFID) Reader/Camera

=

CueCat (barcode lookup) +

So, what is AURA really?

PDA +

802.11 (Bluetooth/CDPD/3G) +

Bar Code (RFID) Reader/Camera



CueCat (barcode lookup) +

Physical Object Annotation +

So, what is AURA really?

PDA +

802.11 (Bluetooth/CDPD/3G) +

Bar Code (RFID) Reader/Camera

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CueCat (barcode lookup) +

Physical Object Annotation +

Archival of AURA Digital Encounters

Roadmap



- Demo: ArtAURAs Gallery Tour
- Other AURA Features
- System Overview
- Research Opportunities
- Future Direction

ArtAURAs

- Collaboration with MS Arts Collection

ArtAURAs

- Collaboration with MS Arts Collection
- Goal
 - provide virtual guided tour for visitors to the Conference Center/eBC

ArtAURAs

- Collaboration with MS Arts Collection
- Goal
 - provide virtual guided tour for visitors to the Conference Center/eBC
- Current Status:
 - User Study at Building 33
 - Possible deployment

Demo

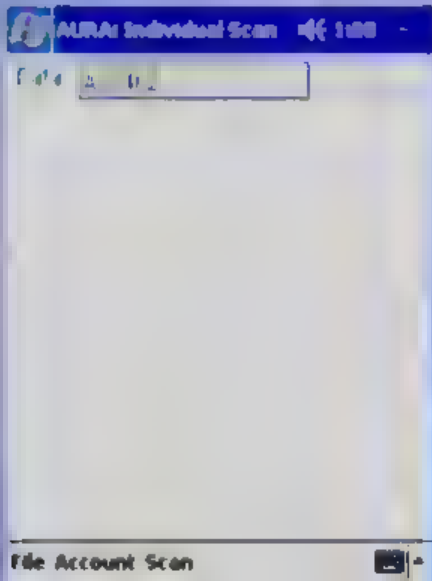


Symbol SPS 3000
Barcode reader &
Wireless Network Sled



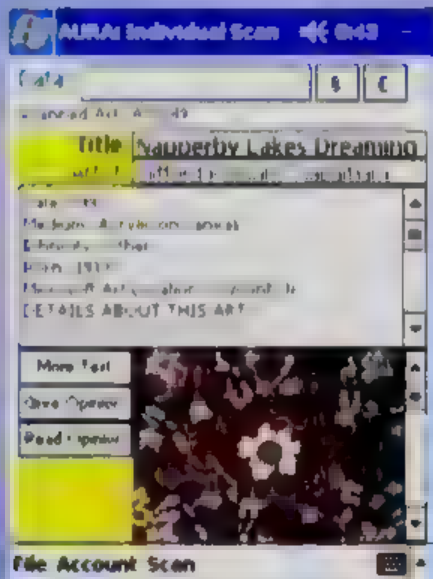
Combined iPaq
and
SPS 3000

ArtAURAs : Virtual Art Tour



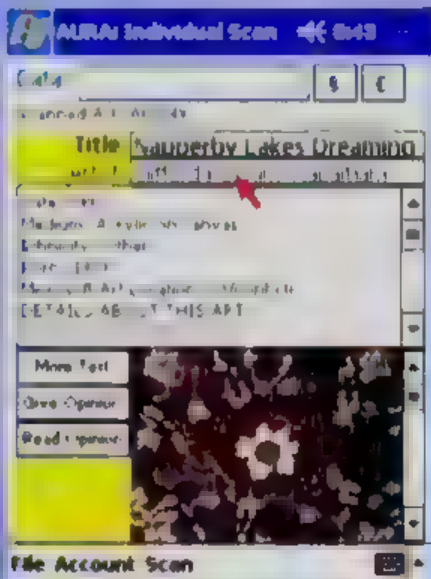
ArtAURAs : Virtual Art Tour

- "Digital shadow" of a GUID



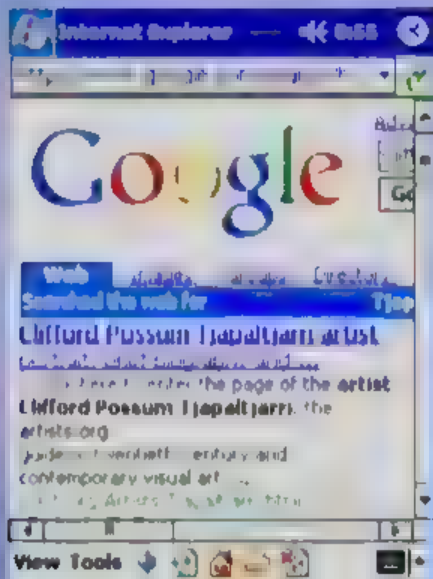
ArtAURAs : Virtual Art Tour

- “Digital shadow” of a GUID



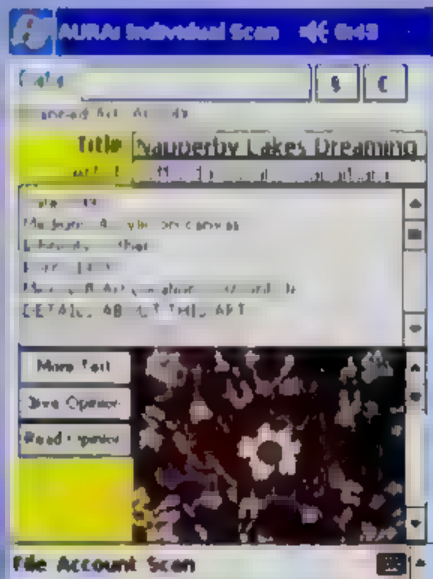
ArtAURAs : Virtual Art Tour

- Google on Artist





ArtAURAs : Virtual Art Tour

- “Digital shadow” of a GUID



ArtAURAs : Virtual Art Tour

 **ArtAURA Individual Scan**  0143

Data

Scanned Art A02249

Title

Sauverby Lakes Dreaming

Year

1997

Medium

Acrylic on canvas

Etiquette

Other

Born

1920

Is a 2D Art Installation

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Image

Give opinion

Read opinion

File Account Scan 

ArtAURAs : Virtual Art Tour

- Physical Object Annotation

The screenshot shows a software window titled "Give Opinions". At the top, it says "Rate this item: Art". Below this is a "Privacy Preferences" section with a checked checkbox and the word "anonymous". A rating scale from 1 to 5 is shown, with the 5th position selected. Under the scale, "great" and "worst" are labeled, with "favorable" written below "great" and "not favorable" below "worst". There are two text input fields: "Written remarks:" containing the text "The style is old but like it" and "Oral remarks:". At the bottom, there are three buttons: "Record", "Playback", and "Remove", followed by "Okay" and "Cancel" buttons. The window has a standard Windows-style title bar with minimize, maximize, and close buttons.

Give Opinions

Rate this item: Art

Privacy Preferences: ☒ anonymous

1 2 3 4 5

great worst

favorable not favorable

Written remarks:

The style is old but like it

Oral remarks:

Record Playback Remove

Okay Cancel

ArtAURAs : Virtual Art Tour

- Physical Object Annotation

The screenshot shows a software window titled "Give Spoons" with a blue header bar. Below the header, the text "Rate this item: Art" is displayed. A red dashed oval highlights the "Privacy Preference:" section, which includes a checked checkbox and the word "anonymous". Below this is a yellow rectangular area containing a horizontal slider with a black knob. The slider has "least favorable" on the left and "most favorable" on the right. Underneath the slider is a text box labeled "Written remarks:" containing the text "The style is different, like it". Below the text box is another label "Oral remarks:". At the bottom of the window are four buttons: "Record", "Playback", "Remove", and "Cancel".

Give Spoons

Rate this item: Art

Privacy Preference: ☒ anonymous

least favorable most favorable

Written remarks:
The style is different, like it

Oral remarks:

Record Playback Remove

Okay Cancel

ArtAURAs : Virtual Art Tour

- Physical Object Annotation

Give Opinions [Close]

Rate this item: Art

Privacy Preferences: ☒ anonymous

1 2 3 4 5

least favorite most favorite

Write a comment

Type your comment here: This is a virtual tour, like it

Oral remarks:

Record **Playback** **Remove**

Okay **Cancel**

ArtAURAs : Virtual Art Tour

- Physical Object Annotation

The screenshot shows a software interface titled "Give Opinions" with a blue header bar. Below the header, the text "Rate this item: Art" is displayed. A "Privacy Preferences" section includes a checked checkbox for "anonymous". A rating scale from 1 to 5 is shown, with the 5th position selected. Below the scale, the words "most favorable" and "least favorable" are positioned. A text box for "Written remarks:" contains the text "The rate should not be it". A dashed red line encloses the "Oral remarks:" section, which includes three buttons: "Record", "Playback", and "Remove". Below these are "Okay" and "Cancel" buttons. A small icon is visible in the bottom right corner.

Give Opinions — — 4:25

Rate this item: Art

Privacy Preferences ☒ anonymous

1 2 3 4 5

most favorable least favorable

Written remarks:

The rate should not be it

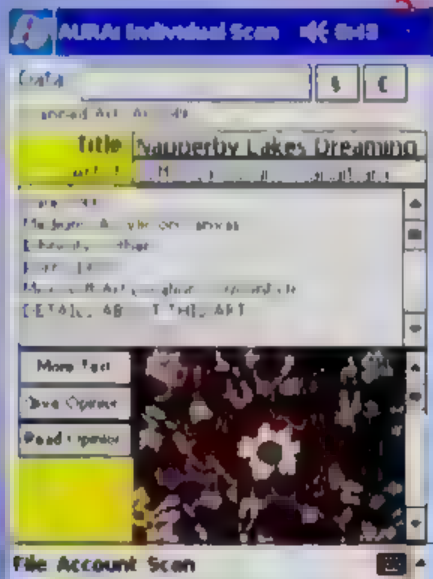
Oral remarks:

Record Playback Remove

Okay Cancel

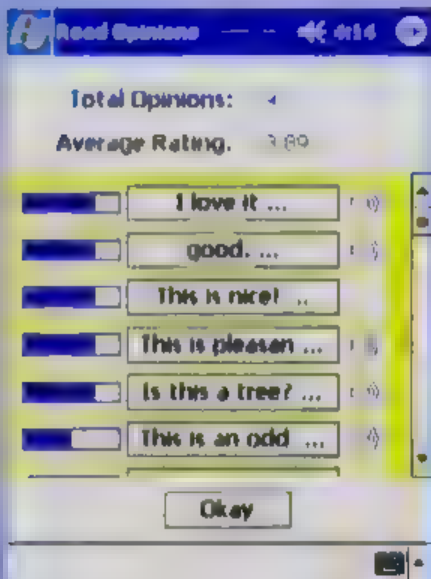
ArtAURAs : Virtual Art Tour

- “Digital shadow” of a GUID



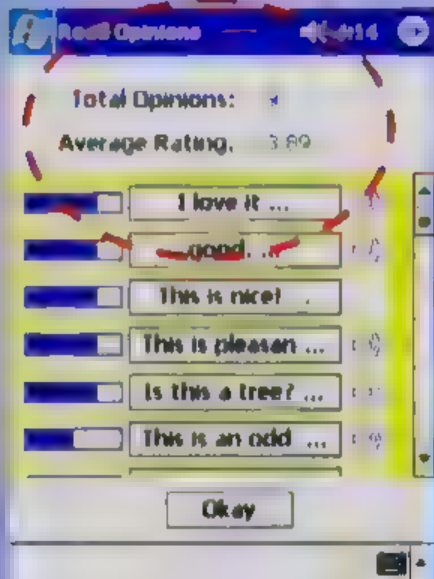
ArtAURAs : Virtual Art Tour

- Ratings and conversations



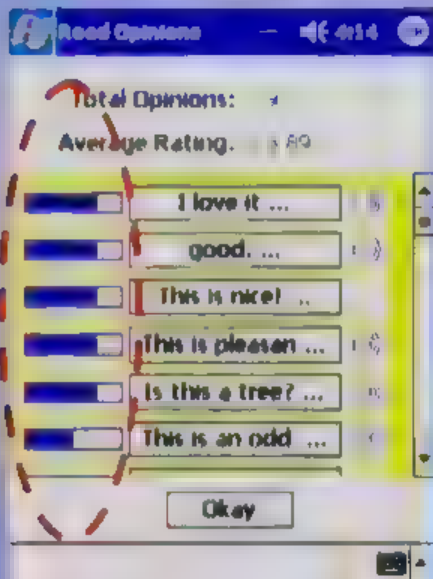
ArtAURAs : Virtual Art Tour

- Ratings and conversations



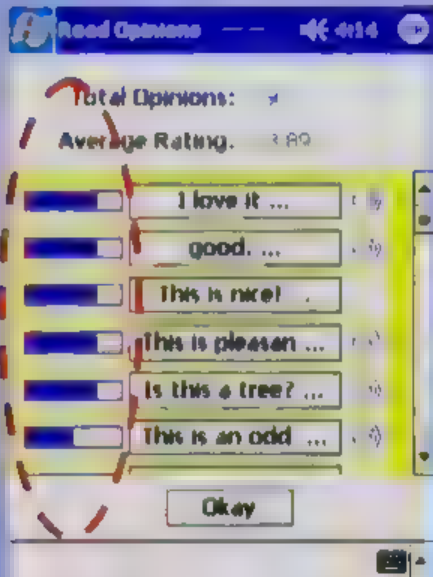
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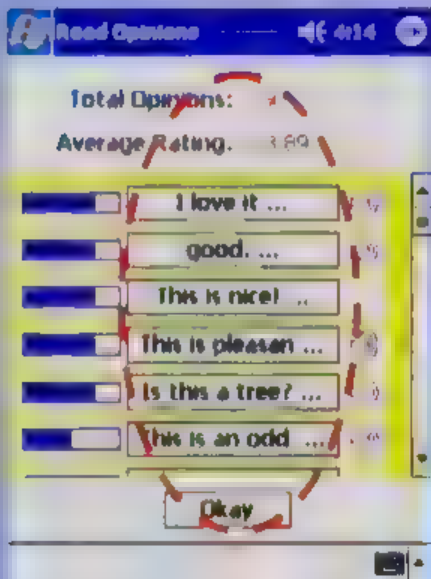
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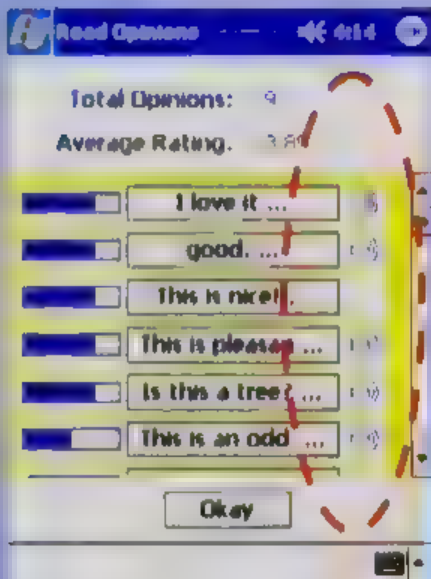
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ArtAURAs : Virtual Art Tour

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ArtAURAs : Virtual Art Tour

- Detailed comment

 System Details 

Rated: Not Included

Rating: 5

Timestamp: 10 AM 8/9/2002

Written remarks:

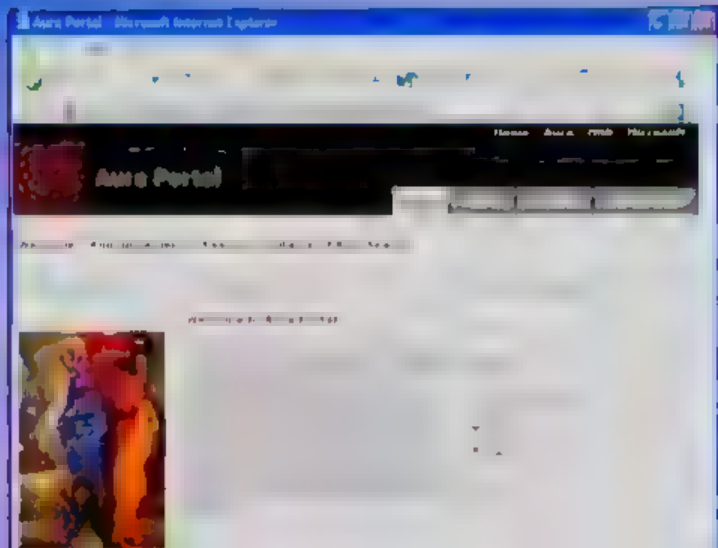
Amazing piece not that I am an artist!

Oral remarks:

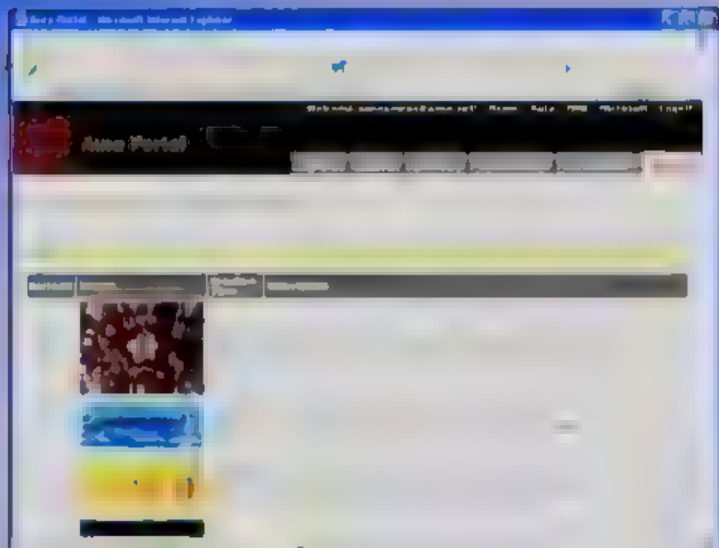
Playback

Okay

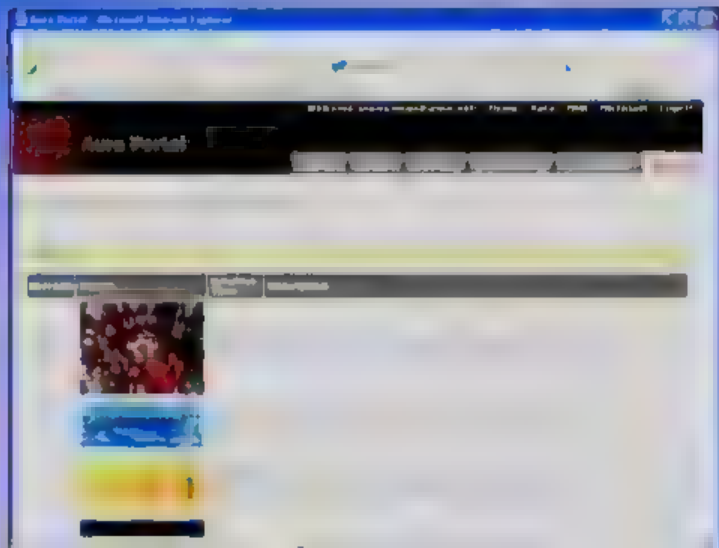
Aura Portal: Aura User Community



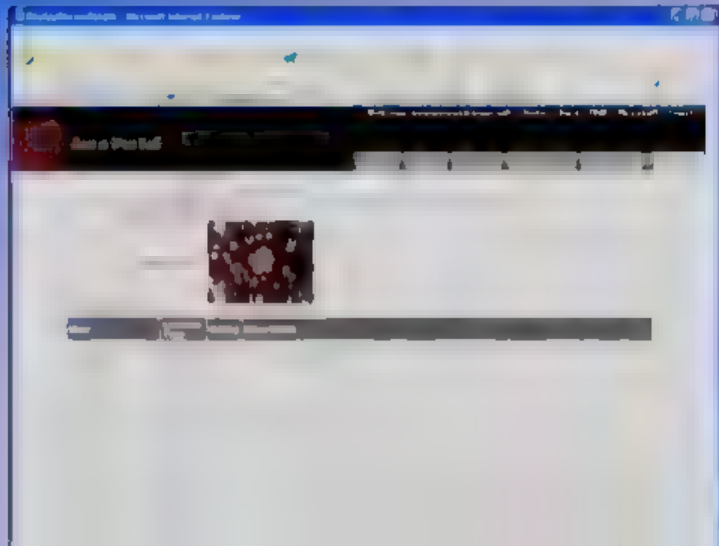
Aura Portal: Physical Annotation Repository



Aura Portal: Physical Annotation Repository



Aura Portal: GUID-based Bulletin Board/Newsgroup



Roadmap



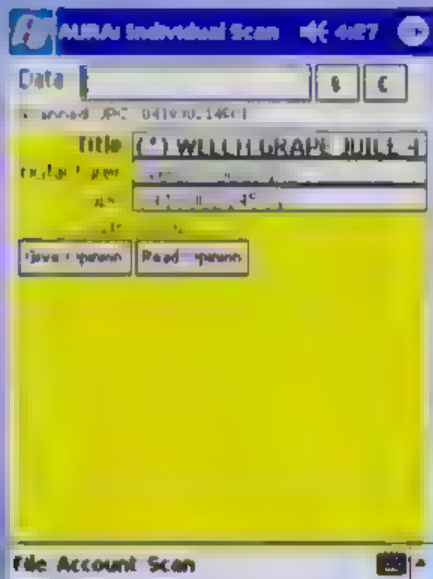
- Demo: ArtAURAs Gallery Tour
- Other AURA Features
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- Future Directions

Other barcodes

- **UPC : consumer products**
- **ISBN: books**
- **Inventory and asset tracking**

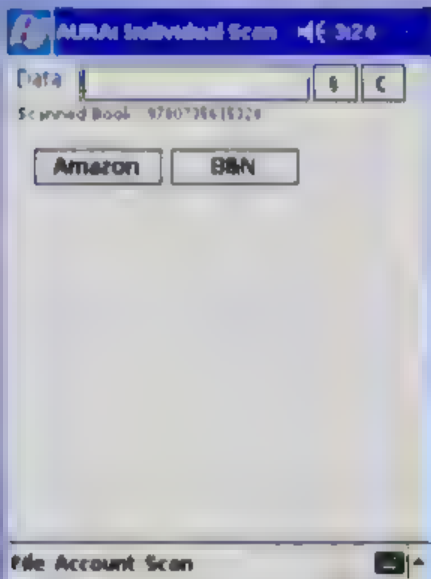
AURA : Consumer Products

- Consumer products with UPC codes



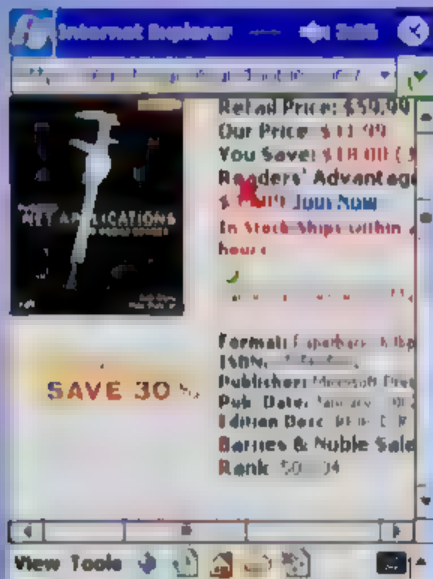
AURA : Books ... and others

- Amazon and B&N services

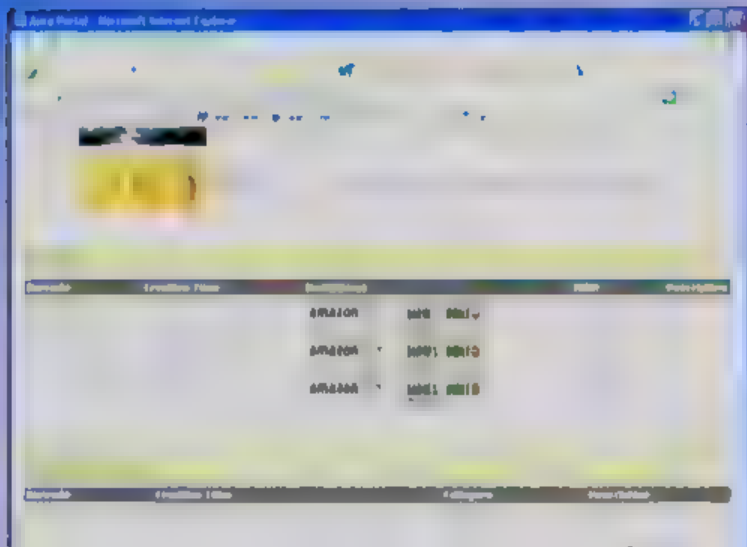


AURA : Books ... and others

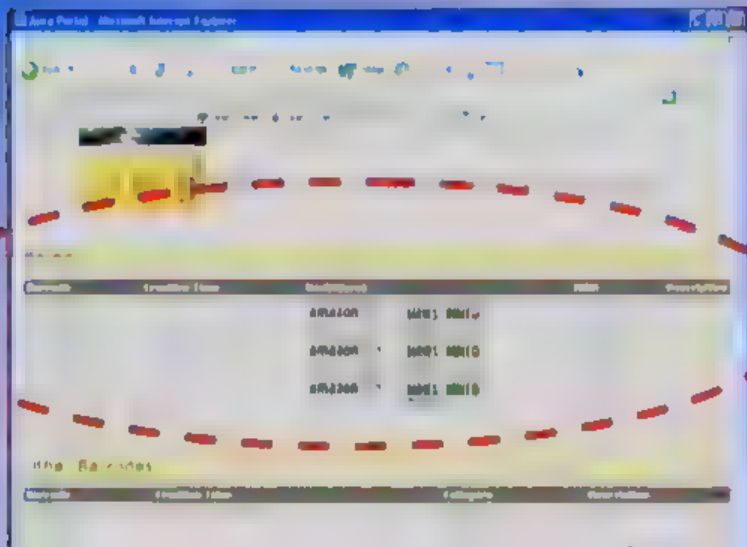
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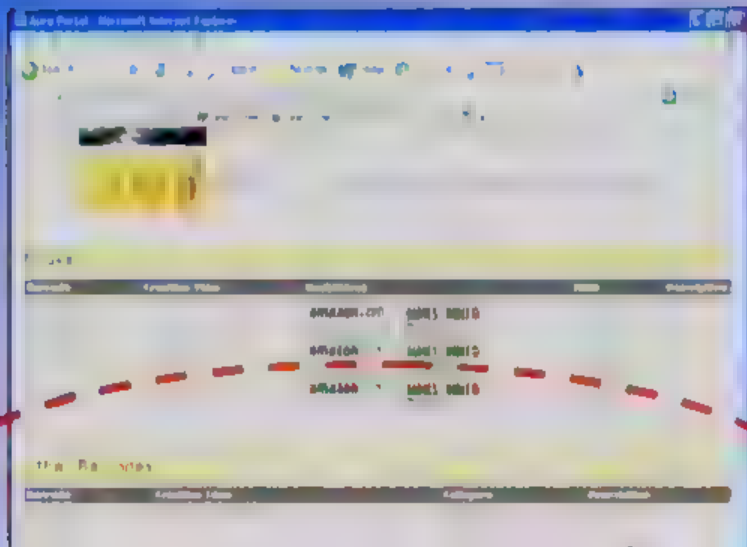
Aura Portal: ISBN, UPC, Asset Tracking



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Roadmap



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AURA Components

- Compact Framework Client(s)
- Backend Web Services
- Aura Portal
- Aura Runtime Library
- Aura Database/Cache
- (external services)

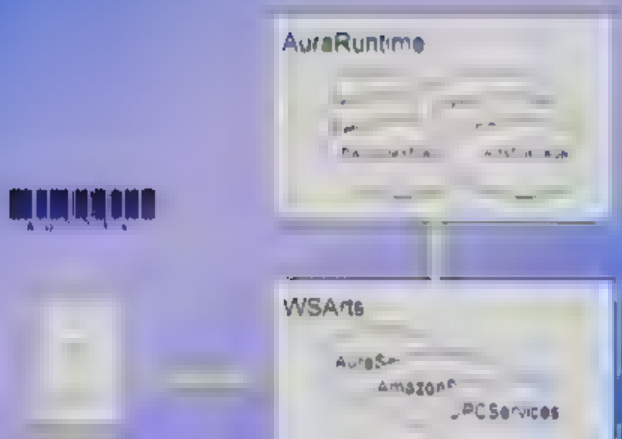
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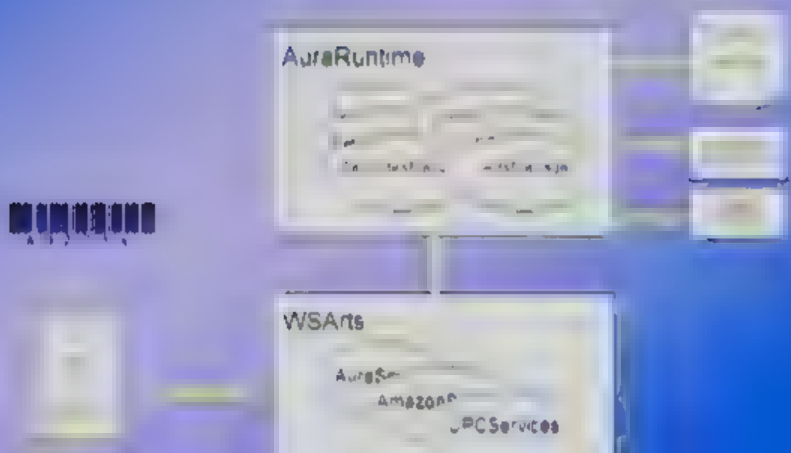
ArtAURAs: how it works



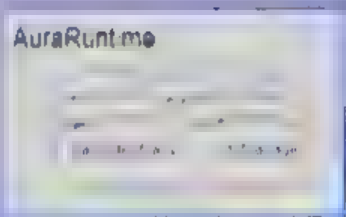
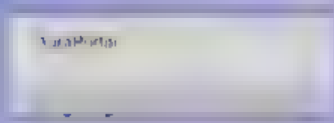
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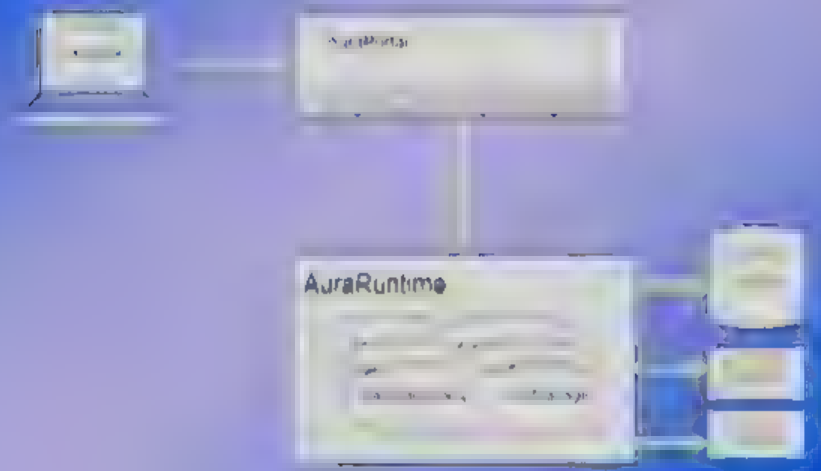
ArtAURAs: how it works



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Summary of what AURA does

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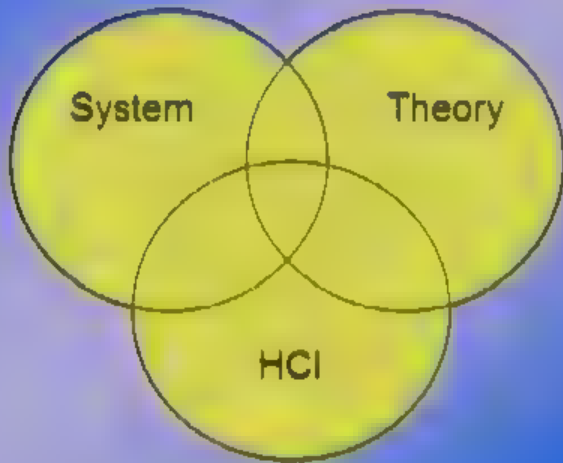
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- **Archival Services**
 - Books/Music collection (at work)
 - Shopping List (future)

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AURA Research Opportunities



AURA Research: HCI

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 - Reputation inference across contexts
- Vision/Speech
 - On the fly auto-detection of physical GUID (face/voice recognition)

AURA Research: Theory

- Public goods

- *The Commons Problem* Hardin (1968)
- *The Collective Good Problem* Samuelson (1954)
- *Free-rider Problem* Grossman and Hart (1980)
- *Folk Theorem* Friedman (1971), Fudenberg and Maskin (1986), Kandori (1994, 2002)

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- Sociology

AURA Research : Summary

- How “future” wireless and ubiquitous applications are available now, and their implications.

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- Replace laser barcodes
 - Digital camera
 - RFID

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- Indoor navigation
- Office asset/document management

<http://aura.research.microsoft.com/>

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Matt Kearns

Bas Hugenholtz



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